



# ICELAND

## FINANCIAL SECTOR ASSESSMENT PROGRAM

July 2023

### TECHNICAL NOTE ON MANAGEMENT AND SUPERVISION OF CLIMATE-RELATED FINANCIAL RISKS IN THE BANKING SECTOR

This paper on Iceland was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on June 13, 2023.

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# TECHNICAL NOTE

## MANAGEMENT AND SUPERVISION OF CLIMATE-RELATED FINANCIAL RISKS IN THE BANKING SECTOR

Prepared By  
**Monetary and Capital Markets  
Department**

This Technical Note was prepared by Alexis Boher (MCM) in the context of the Financial Sector Assessment Program in Iceland, led by Etienne B. Yehoue. It contains technical analysis and detailed information underpinning the FSAP's findings and recommendations. Further information on the FSAP can be found at:

<http://www.imf.org/external/np/fsap/fssa.aspx>

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## Glossary

BCBS	Basel Committee on Banking Supervision
BTAR	Banking Book Taxonomy Alignment Ratio (EBA)
CBI	Central Bank of Iceland
CSRD	Corporate Sustainability Reporting Directive (EU)
EBA	European Banking Authority
D-SIB	Domestic Systemically Important Bank
EEA	European Economic Area
EIOPA	European Insurance and Occupational Pensions Authority
ESG	Environmental, Social, and Governance
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EU	European Union
FSA	Financial Supervisory Authority (CBI)
FSAP	Financial Stability Assessment Program (IMF)
FSB	Financial Stability Board (CBI)
GAR	Green Asset Ratio (EBA)
GHG	Greenhouse Gas
GL	Guidelines (EBA)
ICAAP	Internal Capital Adequacy Assessment Program
ILAAP	Internal Liquidity Adequacy Assessment Program
IMF	International Monetary Fund
IFRS	International Financial Reporting Standards
ISSB	International Sustainability Standards Board (IFRS Foundation)
KPI	Key Performance Indicator
KRI	Key Risk Indicator
MCM	Monetary and Capital Markets Department (IMF)
MoEEC	Ministry of the Environment, Energy, and Climate
MoFEA	Ministry of Finance and Economic Affairs
NFRD	Non-Financial Reporting Directive (EU)
NGFS	Network of Central Banks and Supervisors for Greening the Financial System

RTS	Regulatory Technical Standards (EBA)
SFDR	Sustainable Finance Disclosure Regulation (EU)
SREP	Supervisory Review and Evaluation Process (EBA)
TCFD	Task Force on Climate-Related Financial Disclosures (FSB)
TCFR	Task Force on Climate-Related Financial Risks (FSB)

## EXECUTIVE SUMMARY

**The Icelandic authorities are committed to addressing climate change issues and reaching ambitious objectives to reduce GHG emissions.** Iceland is naturally exposed to significant natural hazards, such as volcanic eruptions and extreme weather conditions. The country is also exposed to physical risks resulting from climate change, such as sea acidification and melting glaciers (a long-term risk), as well as climate change transition risks, for instance, concerning the fisheries and transportation sectors. Still, Iceland can leverage its unique assets to overcome challenges of adapting to climate change. One asset is Iceland's abundant domestically produced renewable energies that cover nearly all the country's heat and electricity production needs. The 2020 Climate Action Plan and the 2021 Iceland's Strategy on Adaptation to Climate Change include ambitious objectives toward GHG emissions' neutrality.

**Domestic coordination with the Central Bank of Iceland (CBI) should be enhanced to support adequate consideration of climate-related financial risks within the financial sector.** Various ministries and public agencies are working on implementing the 2020 Climate Action Plan, but coordination with the CBI is limited. Despite the sectoral approach to this Plan, the financial sector (especially the banking sector) should be considered with greater scrutiny, as it should be a contributor to the plan and because it could be exposed to direct and indirect climate change effects. The CBI has a legal mandate on financial stability and financial supervision that applies to climate-related financial risks and consequently, the central bank should be involved in governmental coordination and cooperation arrangements on climate change issues. The CBI should also consider partnering with all relevant stakeholders to upgrade the production of relevant climate-related data and ensure optimal focus on and accuracy of the financial supervision strategy. This partnership would be mutually beneficial and informative for all involved parties.

**Icelandic banks' exposure to climate-related financial risks still cannot be precisely assessed, because of the significant data gaps that exist while the regulatory framework is under construction.** The development by standard setters (BCBS, FSB, ISSB<sup>1</sup>) of international standards on climate-related financial risks applicable to the banking sector<sup>2</sup> is still ongoing. The standards include regulations issued by the European Union (EU) and the European Banking Authority (EBA) that Iceland, as a European Economic Area (EEA) member country, implements. Moreover, EU/EBA regulations on ESG (environmental, social, and governance), whose scope is wider than climate-related financial risks, are not yet stabilized nor fully applicable to the country. In the near term, the Icelandic authorities should consider tailoring the implementation of EU/EBA regulations to Iceland's specific needs and the supervisory needs of the CBI using the principle of proportionality, which is especially relevant for climate-related financial risks. Some progress on measuring banks' exposure

<sup>1</sup> BCBS = Basel Committee on Banking Supervision; FSB = Financial Stability Board; ISSB = International Sustainability Standards Board.

<sup>2</sup> The 2023 Iceland FSAP made a pilot assessment of the implementation of "Principles for the effective management and supervision of climate-related financial risks," issued by the Basel Committee on Banking Supervision in June 2022.

to climate-related financial risks has been made recently, notably through the enhanced Basel Pillar 3 financial disclosure on ESG in 2022. Though public information is uneven and limited, some specific sectoral risk exposure has already been highlighted, on the fisheries sector, for example. Yet the CBI is facing the serious issue of collecting banks' relevant data, which would be useful in assessing more thoroughly banks' exposure to climate-related physical and transition risks. No global risk assessment of such risks using quantitative and qualitative inputs has been performed so far.

**The Central Bank of Iceland should as soon as possible address the data quality and availability issues on climate-related financial risks.** Data quality and availability are a major precondition for effective financial supervision required for banks, insurance companies, and pension funds, due to possible interconnectedness. The CBI should not wait for any EU/EBA regulation specific to climate-related financial risks in the banking sector to be finalized and incorporated in Icelandic law, as it may take some time. The CBI should start to work on enhancing relevant data availability, and collect more comprehensive, granular, and risk-based data on physical and transition risks. This will help the CBI make a more informed preliminary assessment of banks' exposure and decide on any necessary concrete supervisory action accordingly.

**The Central Bank of Iceland considers sustainable finance as a strategic priority for financial supervision in 2022–24, but a concrete action plan for implementation should be set up.**

Official statements and publications issued by the CBI repeatedly mentioned that climate change is seriously considered as part of the financial supervision mandate. The CBI, a member of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) since 2020, closely monitors EU/EBA regulatory developments and cooperates with other Nordic countries to raise awareness. Nonetheless, the CBI has not yet adopted a formal strategic roadmap to implement effective supervision of climate-related financial risks within the banking sector's long-term horizon. Though there remain uncertainties about the final provisions of future EU/EBA regulations that will be applicable in Iceland, brainstorming and preparation should gather pace at the CBI. A structured internal project management framework for effective supervision of climate-related financial risks should be developed soon. Setting a clear but flexible, reasonable, adapted, and efficient action plan involving CBI management, supervisors, and risk experts would help clarify objectives, activities, and expected achievements; monitor indicators; and define roles and responsibilities within the three involved departments (Financial Stability, Prudential Supervision, and Conduct Supervision). There will likely be a need for additional staff, expertise, and tools. An appropriate corresponding three- to five-year budget should be objectively estimated by the CBI using a global and forward-looking approach, and adjustments should be planned accordingly.

**The Central Bank of Iceland has started to incorporate climate-related financial risks within the macroprudential surveillance and supervisory processes.** Human resources and expertise on climate are still limited at the CBI. By mid-March 2023, only one macroprudential specialist and one climate risk specialist were working, part-time, on it within Financial Stability and Prudential Supervision, respectively, with occasional and high-level support of other supervisors. Despite the resource constraints, commendable analytical work has been done, specifically on a first supervisory scenario analysis that focused on the impact of climate-related credit risk on banks' corporate credit



portfolios (March 2023). Moreover, ESG risks have been considered during the 2022 supervisory review and evaluation process (SREP) of Iceland's three larger banks, which included supervisory dialogue with senior management and internal control functions on business model analysis and corporate governance. The CBI has also participated in a few high-level outreach events for the financial sector, including banks, on ESG risks.

**The intensity and thoroughness of systematic supervision of climate-related financial risks within the banking sector should be gradually increased.** Referring to the 18 overarching principles of climate-related financial risk management and supervision issued by the Basel Committee in June 2022, after climate-related data quality has been significantly enhanced, the Central Bank of Iceland should develop a combination of risk-based and targeted supervisory tasks. These should involve all relevant functions: (1) financial stability oversight (mainly on climate scenario analysis and stress testing); (2) microprudential supervision (notably on governance and risk management of climate-related financial risks, especially credit risk, impact assessment on capital and liquidity adequacy, adaptation of business models, and subsequent profitability drivers); and (3) conduct supervision (on the quality of Pillar 3 financial disclosure, for instance).

**Banks should fully incorporate climate-related financial risks into their risk management frameworks in addition to their commendable efforts toward transparency.** Enhanced Pillar 3 financial disclosure on ESG has been uneven among Icelandic banks. However, it is clear that they are aware of their emerging obligations. All banks have established sustainable finance units and worked to enhance their "green" or "blue" profile. Yet enhancing ESG disclosure is not enough. From a risk management perspective, banks should further upgrade and finetune their processes aimed at assessing their risk exposure to climate-related physical and transition risks. They should also assess the risk impact of these climate risks on their prudential capital and liquidity buffers, as well as their business models and profitability. The Central Bank of Iceland should support the expected upgrade of banks' effective and adequate risk management of climate-related financial risks. This can be achieved with hands-on supervisory dialogue while implementing risk-based and proportionate supervision through offsite surveillance and targeted onsite inspections. Ensuring reliable and relevant climate-related data production and regulatory reporting by banks should be an urgent priority of the CBI's supervisory workplan.

**Finally, the Central Bank of Iceland should determine whether banks' capital and liquidity buffers are adequate to cover climate-related financial risks.** If need, additional capital and/or liquidity requirements might be decided, on a case-by-case basis, through an informed assessment of the impact of climate-related financial risks.

## KEY RECOMMENDATIONS

**Table 1. Iceland: Key Recommendations on Management and Supervision of Climate-Related Financial Risks within the Banking Sector**

	Recommendation	Responsible Authorities	Priority
	<b>Supervision of climate-related financial risks in the banking sector</b>		
1.	Produce a global assessment of climate-related financial risks within the financial sector (including banks) to identify actual and potential vulnerabilities. <b>Paras 14 and 32</b>	CBI	MT
2.	Clarify the expected role and contribution of the CBI and the financial sector (including banks) to implement the 2020 Iceland's Climate Action Plan and 2021 Iceland's Strategy on Adaptation to Climate Change at the country level. <b>Paras 17 and 33</b>	CBI MoFEA MoEEC	NT
3.	Enhance domestic cooperation of the CBI with relevant ministries and public agencies involved in climate change issues to develop synergies supporting effective and efficient supervision of climate-related financial risks within the financial sector (including banks), while safeguarding the supervisory independence of the CBI. <b>Paras 17 and 34</b>	CBI MoFEA MoEEC Others	NT
4.	Tailor the implementation of the EU/EBA regulatory framework considering Iceland's specific climate change issues to ensure adequate and proportionate supervision of climate-related financial risks in the banking sector. <b>Paras 23, 35 and 66</b>	CBI MoFEA	MT
5.	Specify a comprehensive CBI supervisory strategy, including a structured action plan, to build an adapted supervisory framework on climate-related financial risks within the financial sector (including banks). <b>Paras 22, 36 and 62</b>	CBI	NT
6.	Assess the need for additional CBI staff, expertise, tools, and budget to ensure appropriate supervision of climate-related financial risks within the financial sector (including banks). <b>Paras 25, 27, 35 and 64</b>	CBI	I
7.	Enhance the CBI's internal organizational framework for oversight and supervision of climate-related financial risks within the financial sector (including banks). <b>Paras 63 and 100</b>	CBI	NT
8.	Develop supervisory assessment methodology, tools, and processes considering existing and future EBA requirements for climate-related financial risks within the banking sector. <b>Paras 67 and 101</b>	CBI	MT
9.	Complete the development of adapted supervisory stress testing and scenario analysis on climate-related financial risks within the banking sector. <b>Paras 68, 69 and 102</b>	CBI	MT

**Table 1. Iceland: Key Recommendations on Management and Supervision of Climate-Related Financial Risks within the Banking Sector (continued)**

	Recommendation	Responsible Authorities	Priority
10.	Bridge data gaps in climate-related financial risks within the banking sector (notably, adapt the collection of useful data by relevant public agencies). <b>Paras 70 and 103</b>	CBI MoECC Others	MT
11.	Engage the banking sector in a more proactive and thorough supervisory dialogue to strengthen respective capacities of supervisors and banks to assess and manage climate-related financial risks. <b>Paras 71 and 104</b>	CBI	I
12.	Disclose supervisory expectations to banks and provide guidance on implementation of corporate governance and risk management of climate-related financial risks. <b>Paras 66 and 105</b>	CBI	MT
<b>Management of climate-related financial risks by the banking sector</b>			
13.	Assess the impact of climate-related financial risks on banks' business models and profitability drivers. <b>Paras 77 and 106</b>	CBI	MT
14.	Assess the adequacy of banks' corporate governance, internal organization and resources, capacity, and internal control of climate-related financial risks. <b>Paras 76 and 107</b>	CBI	MT
15.	Assess the adequacy of banks' risk management frameworks and processes for climate-related financial risks. <b>Paras 81 and 108</b>	CBI	MT
16.	Assess banks' data production and reporting processes for climate-related financial risks and enhance supervisory data collection and analysis concomitantly. <b>Paras 88, 89 and 109</b>	CBI	MT
17.	Assess the impact of climate-related risk drivers of credit risk, as well as the adequacy of adjusted credit risk management processes and mitigation techniques, to evaluate banks' exposure to climate-related credit risk. <b>Paras 92 and 110</b>	CBI	MT
18.	Assess the impact of climate-related risk drivers of market risk, as well as liquidity and funding risks, to evaluate banks' exposure to climate-related liquidity risk. <b>Paras 94, 96 and 111</b>	CBI	MT

**Table 1. Iceland: Key Recommendations on Management and Supervision of Climate-Related Financial Risks within the Banking Sector (concluded)**

	Recommendation	Responsible Authorities	Priority
19.	Ensure that climate-related risk drivers have been adequately incorporated into relevant operational risk management processes, beyond business continuity planning, that may be impacted. <b>Paras 98 and 112</b>	CBI	MT
20.	Assess the adequacy of banks' climate scenario analysis and develop a supervisory dialogue with banks on related results to enhance the impact assessment on capital adequacy and liquidity. <b>Paras 99 and 113</b>	CBI	MT
	<b>Disclosure of climate-related financial risks in the banking sector</b>		
21.	Determine an action plan for effective implementation of EBA data disclosure and reporting standards for climate-related financial risks applicable to the banking sector to ensure reliable data quality and relevant data accuracy. <b>Paras 47 to 51, and 55</b>	CBI MoFEA	NT
22.	Develop regulatory reporting templates and key monitoring indicators of climate-related financial risks within the banking sector for supervisory purposes. <b>Paras 52 and 56</b>	CBI	NT
23.	Ensure adequate financial disclosure of climate-related financial risks by banks. <b>Paras 52 and 57</b>	CBI	MT
24.	Develop institutional supervisory disclosure by the CBI of relevant informative data and analysis of climate-related financial risks within the banking sector. <b>Paras 54 and 58</b>	CBI	MT
I = immediate (within one year); NT = near term (within one to two years); MT = medium term (within three to five years) CBI = Central Bank of Iceland; MoEEC = Ministry of Environment, Energy, and Climate; MoFEA = Ministry of Finance and Economic Affairs.			

## INTRODUCTION

**1. Iceland is actively engaged in addressing climate change issues and implementing reforms to meet international objectives of a low-carbon economy.** The Icelandic government, as well as public agencies and other stakeholders, are mobilized to achieve ambitious and tangible climate-related objectives on all fronts, including energy, transportation, forestry, and preservation of nature and biodiversity, among others. The authorities have issued Iceland’s Climate Action Plan for 2018–2030 which highlights the main objectives and action plans at the national level. A new Plan was adopted in 2020<sup>3</sup> with no defined date, for periodic update.

**2. Growing global attention to climate change has led to better consideration of climate-related financial risks.** The increase in awareness of the financial stability risks associated with climate change and the transition to a low-carbon economy has brought climate-related financial risks within the financial sector to the forefront of the agenda of financial institutions and regulators, including central banks and financial supervision authorities around the world. Supervisors are working hard to integrate climate-related risks into prudential frameworks. This will ensure that the risks and transition are considered within supervisory requirements and processes, as well as risk management within financial institutions. However, progress in risk management and supervision of climate-related financial risks has long been hampered. This is mainly due to data gaps, resource constraints, lack of harmonized methodologies and risk metrics, as well as lack of broadly agreed international standards on climate-related financial risks. Yet international standard setters have made significant progress by developing standards for supervision and disclosure (these standards were not finalized nor implementable when the main Iceland Financial Sector Assessment Program (FSAP) mission took place in March 2023).

**3. Recent international guidance supports effective inclusion of climate-related financial risks in banking regulation, supervision, and risk management.** At the international level, standard setters have mobilized significant resources to develop global standards for disclosure and effective management and supervision of climate-related financial risks within the financial sector<sup>4</sup> (which includes the banking sector, insurance companies, pensions funds, and securities markets). Concerning the banking sector, the Basel Committee on Banking Supervision (BCBS) in 2022 issued “Principles for the effective management and supervision of climate-related financial risks”<sup>5</sup>, which is now the overarching guidance moving forward. Moreover, the Financial Stability Board is still developing harmonized disclosure of climate-related financial risks, which are complex to capture using standardized and relevant methodologies.

<sup>3</sup> Iceland’s Climate Action Plan (October 2020): [201004 Umhverfissraduneytid Adgerdaaaetlun EN V2.pdf \(government.is\)](https://ust.is/library/Skrar/loft/NIR/0_PaMsProjections_Report_2023_WITH%20BOOKMARKS.pdf). This plan is periodically updated: [https://ust.is/library/Skrar/loft/NIR/0\\_PaMsProjections\\_Report\\_2023\\_WITH%20BOOKMARKS.pdf](https://ust.is/library/Skrar/loft/NIR/0_PaMsProjections_Report_2023_WITH%20BOOKMARKS.pdf).

<sup>4</sup> Main standard setters relevant for climate-related financial risks within the banking sector are (1) the Basel Committee on Banking Supervision (BCBS); (2) the Financial Stability Board, notably through the Task Force on Climate-Related Financial Risks (TCFR), and the Task Force on Financial Disclosure (TCFD); and (3) the International Sustainability Standards Board (ISSB) on accounting.

<sup>5</sup> BCBS principles on climate-related financial risks (June 2022): <https://www.bis.org/bcbs/publ/d532.pdf>.

**4. The emerging European regulatory framework for climate-related financial risks is providing strong support to the Icelandic authorities.** European Institutions and governments (at large, including Iceland along with other member countries of the European Economic Area—EEA) have made climate change a priority. Relevant authorities of the European Union (EU) have made steady progress on financial regulation and supervision, including enhancing regulations on environment, social, and governance (ESG) risk. However, the European Banking Authority (EBA) is still working on standards and guidelines incorporating climate-related financial risks, which are being finalized or enforced progressively during an ongoing transition period that will continue beyond 2023. The EU/EBA regulatory framework on climate-related financial risks is not yet final nor stabilized, but recent publications have clearly paved the way for effective supervision and management of such risks within the banking sector. Iceland will certainly benefit from the EU/EBA framework when building its national framework in that domain.

**5. In response to the authorities' request, the Iceland FSAP mission includes a high-level pilot assessment of the response of the Central Bank of Iceland (CBI) on supervision and management of climate-related financial risks within the banking sector.** The IMF has recently included climate change within the scope of the Financial Sector Assessment Program (FSAP). Subsequently, the issuance of the 2022 BCBS principles enabled a preliminary assessment of management and supervision of climate-related financial risks within the banking sector, based on these newly established standards. Since few FSAP missions have completed such an assessment since 2022, it has been performed in a pilot mode, aiming at evaluating the CBI's response by March 2023. There will not be a compliance report nor grading of the implementation of each of the 18 BCBS principles, because these would be premature.

**6. This FSAP technical note (TN) is based on various sources of public information, supplemented by insights shared by the authorities during the onsite mission.** Reliable sources of documentation available on the internet, including the government's official publications, CBI reports, and banks' financial disclosure, have been used, as well as some internal materials provided by the CBI. Given the lack of official data on climate-related financial risks, data analysis on banks' exposure has been limited. This technical note mentions only public information. The mission met with relevant ministries, external climate experts, CBI officials and staff, as well as representatives of the financial sector, including larger banks<sup>6</sup>.

**7. The FSAP assessment methodology is closely linked to the 2022 BCBS principles and offers key recommendations for enhancing oversight and supervision of climate-related financial risks in the banking sector.** The mission first collected background information on climate-related financial risks within the whole financial sector in order to draw a global picture of

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<sup>6</sup> From March 14 to 28, 2023, the mission met with representatives of the Central Bank of Iceland (managers and staff from Financial Stability, Prudential Supervision, and Conduct Supervision), the Ministry of Finance and Economic Affairs (MoFEA), the Ministry of the Environment, Energy, and Climate (MoEEC), the Icelandic Climate Council, the Icelandic Meteorologic Office (Department of Climate and Adaptation), the Environment Agency, the University of Iceland, Finance Iceland, the Pension Funds Association, and the three largest banks (Arion Banki, Islandsbanki, Landsbankinn).

risk exposure and identify possible interconnectedness within the financial sector. Then, the mission turned to the assessment, with a focus on the banking sector only. The mission reviewed each of the 18 BCBS principles on management and supervision of climate-related financial risks, in order to assess their implementation status. Extensive discussions with the CBI took place to appraise ongoing or planned supervisory actions, identify any implementation challenges, and analyze preliminary outcomes. As needed, this TN suggests recommendations aimed at supporting the authorities, especially the CBI, to move forward and establish an effective and relevant supervisory framework on banking supervision of climate-related financial risks over a medium- to long-term horizon.

**8. The assessment in this technical note is divided in 4 chapters:** Chapter 1 presents the authorities' action to address the impact of climate change on the financial sector. Chapter 2 provides an overview of the banking sector's exposure to climate-related financial risks. Chapter 3 examines supervisory reporting and financial disclosure of climate-related financial risks within the banking sector. And Chapter 4 explores the management and supervision of such risks.

## **AUTHORITIES' ACTION TO ADDRESS THE IMPACT OF CLIMATE CHANGE ON THE FINANCIAL SECTOR**

**9. This chapter provides general background information on policies implemented at the country level by the Icelandic authorities.** This information will help link the FSAP assessment specific to climate-related financial risks within the banking sector to the country's global risk profile and response to climate change. Based on public information, and insights shared by the Icelandic authorities and climate experts during the mission, the chapter develops a concise overview of Iceland's vulnerabilities to the effects of climate change (Section A) and an overall perspective of the authorities' response at the country level, with a focus on the financial sector (Section B).

### **A. Overview of Iceland's Vulnerabilities to the Effects of Climate Change**

**10. Located in northern latitudes, Iceland is significantly exposed to climate change.** For Iceland, as for any country, being aware of its inner characteristics is crucial for making a relevant assessment of the country's climate-related risk profile. For instance, geography, geology, climatology, natural resources, demography, institutions, policies, and awareness of climate change should be considered altogether when trying to determine (1) the country's raw exposure to climate change; (2) the country's capacity to adapt to and mitigate risks resulting from climate change; and therefore (3) the effective impact of climate change. In that regard, despite its geographical location as an island-country in the Arctic region, Iceland appears to have idiosyncratic strengths that are tangible assets that may help compensate for real vulnerabilities stemming from climate-related physical and transition risks.

**11. Physical risks and vulnerabilities resulting from climate change look diverse and material in Iceland.** A concise (and perfectible) description of Iceland's exposure to physical risks

includes the following main aspects<sup>7</sup>. Iceland is prone to various kinds of natural hazards, such as volcanic eruptions, earthquakes, severe weather on sea and land, avalanches, floods, drought, and wildfires. Climate change may impact the country through natural hazards such as increased frequency of storms and precipitations, sea acidification (a significant concern), sea level rise, accelerated melting of permanent glaciers due to global warming<sup>8</sup>, and increased risk of landslides due to changes in permafrost, among other factors. Natural hazards (whether they result from climate change or not) occur often and may directly cause fatalities and property damage, as well as indirectly impact the economic activity and solvency of banks' debtors. Iceland is accustomed to managing natural hazards, and the authorities already have in place dedicated mechanisms, such as the National Catastrophe Insurance of Iceland, to help deal with them.

**12. Transition risks resulting from adaptation policies to tackle climate change may look real but manageable in Iceland, given the country's strengths.** A quick overview of Iceland's exposure to transition risks<sup>9</sup> shows that the authorities have adopted proactive policies that have dramatically reduced the country's dependence on fossil fuels—a result of promoting the use of renewable energy. Compared with many other countries, because of its unique location and natural characteristics, Iceland benefits from significant renewable resources, notably hydropower and geothermal, which have been harnessed for a very long time and at low cost (but may require further improvement of energy saving). Eighty-five percent of indoor heating comes from geothermal energy (and most of the rest from electricity), and nearly 100 percent of electricity is produced from renewable energy sources. The transition to “greener” energy production and consumption presents challenges for many economic sectors, like construction, transportation (with air travel dependency), and fisheries (particularly exposed to adaptation challenges in Iceland), among others. In addition, several sectors, such as heavy industrial processes and chemical, road transport, agriculture, and fisheries, still need to adapt in order to reduce GHG and methane emissions and increase the use of renewable energy for non-electricity production sectors. Iceland excels at promoting the use of electric vehicles (yet “greening” the significant car rental activity related to growing tourism is one adaptation challenge). Iceland being an advanced economy, the country's global wealth (high GDP), high level of education, limited population, and high-quality infrastructure, among other factors, are strong assets in facing climate-related transition risks and adapting to climate change.

**13. Making a risk impact assessment of climate change in Iceland requires combining various sources of information at the country level.** The Icelandic Meteorological Office (IMO) conducts risk assessments of natural hazards upon request by the government. Accordingly, the

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<sup>7</sup> The FSAP mission benefited from precious insights shared by the Icelandic Meteorological Office (IMO): <https://en.vedur.is/>. To go deeper, see these IMO publications relevant to climate change: <https://en.vedur.is/about-imo/publications/>, notably an updated analysis of the weather in Iceland (February 2023), <https://en.vedur.is/about-imo/news/the-weather-in-iceland-in-2022>.

<sup>8</sup> Yet in most of Iceland land is rising fast enough due to melting glaciers to more than fully offset the rise in sea level.

<sup>9</sup> External climate experts mentioned a White Paper on Climate Change Adaptation, which is not available in English. Another NGO publication on the same topic covers Nordic countries, including some information on Iceland: <https://mediamanager.sei.org/documents/Publications/Climate/N-CMAEP-2013-White-Paper-Nordic-Countries-Adaptation.pdf>.



IMO's mission includes considerations for climate change. After meeting with the IMO and other climate-related agencies, the FSAP mission concluded that the global risk assessment of climate change at the country level has been a complex project not yet fully completed. Information is not centralized, despite multiple efforts. The numerous information sources from various ministries and public agencies must be combined to capture the country's risk assessment with regard to transition risks. It would be useful for the authorities to draft a comprehensive overview of Iceland's climate risk profile in a single document (or a set of related documents). Given available documentation and considering the FSAP mission's constraints, the TN does not include a summary of the country-wide risk impact assessment of climate change in Iceland.

**14. A global assessment of potential and actual vulnerabilities of the financial sector to climate-related financial risks is needed.** Beyond information available at the country level, no public climate-related information specific to the financial sector (risk assessment of exposure to physical and transition risks) has been identified from official sources, including ministries as well as the CBI. Data availability issues may explain why such a climate risk assessment of the financial sector has yet to be made.

## B. Government Initiatives to Address Climate Change Issues in Iceland

**15. The Icelandic government is committed to addressing issues related to climate change<sup>10</sup>.** Adaptation to climate change and mitigation of its effects have been a high priority for the Icelandic authorities for years. Political will is strong to reach Iceland's commitments in the Paris Agreement, specifically reducing greenhouse gas (GHG) emissions by 55 percent by 2030 in comparison to 1990 (increased in 2021 from 40 percent), as well as achieving GHG emissions' neutrality by 2040<sup>11</sup>. These goals will be a considerable challenge for Iceland.

**16. Ministries, public agencies, and various experts are joining initiatives and efforts to implement relevant policies on climate change.** The Ministry of the Environment, Energy, and Climate (MoEEC) is in charge of climate-related issues. The MoEEC works together with other ministries involved in strategic planning and implementation of climate-related objectives in specific sectors. It is also working with individual business sectors to draft their own action plans. The MoEEC coordinates with the Ministry of Finance and Economic Affairs (MoFEA) on, for instance, budget funding (and taxes) of climate-related policies, financial regulation, development of "green finance," and financial stability. In addition, several public agencies, such as the Icelandic Climate Council, the IMO, and the Environment Agency of Iceland, support the authorities with strategic thinking, analytics, risk monitoring, and concrete actions (on forestry, for example). Nongovernmental organizations, associations, and academia (for instance, the University of Iceland and the Agricultural University of Iceland) contribute to policy design and implementation. Ministries and public agencies are endeavoring to enhance strategy and implement action plans, including the adoption of EU

<sup>10</sup> Appendix I provides a tentative list of reference documents identified by IMF staff from public sources of information on the authorities' response to climate change in Iceland.

<sup>11</sup> Ministry of the Environment, Energy, and Climate: <https://www.government.is/topics/environment-climate-and-nature-protection/climate-change/>.

regulations into national law, and the development of analytical tools (metrics) and relevant databases that lack data on transition risks. So, though the national adaptation strategy was defined in 2021 (see below), the national adaptation plan is still under preparation.

**17. Coordination and information sharing among the Icelandic authorities may be beneficial to all stakeholders, including the Central Bank of Iceland.** Notwithstanding the existing formal coordination framework (through a dedicated interministerial committee) and informal networking and dialogue among Icelandic ministries and public agencies, the mission’s meetings highlighted that the CBI is not yet fully integrated into the authorities’ strategic coordination framework of the response to climate change. Closer cooperation and interaction involving the CBI may be useful because (1) the financial sector (notably banks, but also insurance companies and pension funds, as well as securities markets) should play a crucial role to support the Icelandic economy to reach the country’s strategic objectives on adaptation to climate change; and (2) financial regulation and supervision should consider strategic risks pertaining to climate change, for instance, when making the business model analysis through the annual supervisory review and evaluation process (SREP) of larger banks. The CBI may also share scenario analysis and risk assessment of climate-related financial risks within the financial sector with relevant ministries and public agencies involved in existing policy coordination frameworks on climate change. In addition, cooperation with ministries and public agencies would be useful in developing synergies and agreement on a common and proportionate strategy aimed at producing relevant data needed to supervise climate-related financial risks. This would avoid overburdening financial institutions and requesting nonrelevant or immaterial data. Government agencies may help in providing relevant data that fall beyond the usual scope of data collected by banks (for instance, on energy efficiency of properties), and these data would be needed to comply with the EU/EBA regulations.

**18. Iceland’s 2020 Climate Action Plan is being implemented to reach ambitious objectives but lacks objectives pertaining to the financial sector.** The 2020 Iceland Climate Action Plan is an update of the previous Climate Action Plan for 2018–30. A minimum of ISK 46 billion is expected to be spent on key climate actions during 2020–24. This global plan of 48 actions has been shared in a summary document in English<sup>12</sup>. Though it covers a comprehensive range of domains, no strategic action explicitly mentions or targets the financial sector (which does not mean that no action is actually implemented). In addition, as stated by the MoEEC, “a country wide adaptation plan is under way, and the research on which to build such a plan is ongoing”.<sup>13</sup> Overall, no implementation update of the 2020 plan had been disclosed as of March 2023.

**19. Nonetheless, Iceland’s 2021 Strategy on Adaptation to Climate Change includes specific goals concerning insurance and financial activities that partially cover climate-related financial risks within the financial sector.** There are eight specific goals concerning insurance and financial activities in the strategy (Box 1). This specific-goal setting shows progress toward the

<sup>12</sup> Iceland’s 2020 Climate Action Plan: [201004 Umhverfisraduneytid Adgerdaaetlun EN V2.pdf \(government.is\)](https://www.government.is/201004-Umhverfisraduneytid-Adgerdaaetlun-EN-V2.pdf).

<sup>13</sup> Source : <https://www.government.is/topics/environment-climate-and-nature-protection/climate-change/adaptation/>.

authorities' recognition of the financial sector's contribution to Iceland's adaptation to climate change. Yet financial stability is not clearly the main concern underpinning the specific goals, which should further incorporate climate-related financial risks, especially with regard to the banking sector. Overall, the authorities have not yet established a specific strategy focusing on the whole financial sector as a contributor to the Climate Action Plan and subject to the Strategy on Adaptation to Climate Change. Nevertheless, the authorities have already implemented outreach communications and activities (workshops, for instance) for financial institutions in order to raise awareness of climate change issues and bolster their ownership of expected related action.

### Box 1. Iceland's Strategy on Adaptation to Climate Change (2021)

Eight specific goals in the national climate change adaptation strategy (2021) relate to insurance and financial activities in Iceland. Here is an excerpt from Section J of the document.

#### J. Goals concerning insurance and financial activities

J1. Research on the ability of insurance undertakings, banks, and pension funds to handle the risks of climate change shall be enhanced and serve as a knowledge base for the best ways to use insurance and finances to manage such risks.

J2. Measures taken by domestic insurance and financial undertakings are to be transparent when it comes to climate change adaptation as well as the reporting of financial bodies concerning climate-related risks to asset and loan portfolios.

J3. The legislation on insurance against natural hazards and adaptation to climate change shall be reviewed, especially in relation to flood risks and vegetation and forest fires.

J4. Insurance and financial companies are to have good knowledge of climate risks to ensure that their decision-making as regards loans and/or investments will take into account the impacts of climate change.

J5. Data from insurance companies, both The Natural Catastrophe Insurance of Iceland and private insurance companies, are to be utilized as best as possible for national planning and the revision of building regulations.

J6. The public should know the dangers posed by climate change, use preventive measures because of them, and know what insurance coverage is compulsory and what coverage is available from private insurance undertakings.

J7. Insurance and financial institutions should participate in useful and active dialogue and consultation with the ministries, local governments, and regulatory bodies that are involved in this policy area, as regards climate change adaptation and methods to forestall damages, lessen or remedy their consequences.

J8. The division of duties in connection with climate related disasters shall be in conformity with the United Nations Sendai Framework and Sustainable Development Goal 11.B.

**20. Public financial management in Iceland is being adapted to contribute to sustainable finance.** The MoFEA published a Sustainable Financing Framework to promote "green financing" and "blue financing." As stated by the ministry, the Icelandic government acknowledges the important

role that capital markets can play in the transition to sustainability by allocating capital for sustainable projects and investments. Several national private and public parties have issued green, social, and/or sustainable bonds. Iceland's Sovereign Sustainable Financing Framework<sup>14</sup> has been developed to align with the Green Bond Principles (2021), Green Loan Principles (2021), the Social Bond Principles (2021), Sustainability Bond Guidelines (2021), and Climate Bonds Standard (2019). It has also been benchmarked, to the extent possible, to the EU Taxonomy for sustainable economic activities, and a draft of the European Green Bond Standard. Based on this framework, the Government Debt Management can issue debt instruments (bonds, loans, bills, and/or other types), such as green, social, blue, and/or sustainable instruments.

### C. Consideration Given to Climate Change in Financial Supervision in Iceland

**21. The Central Bank of Iceland has included sustainable finance as one its four major objectives of its 2022–24 supervisory strategy.** The CBI is committed to contributing to address climate change issues, as declared in the CBI's individual pledge for COP26<sup>15</sup> and other public statements<sup>16</sup>. As a public institution in Iceland, the CBI released a sustainability report in July 2022.<sup>17</sup> The report elaborates on the CBI's internal strategy on sustainability, as well as the central bank's initiatives and outreach to the financial sector to raise awareness and convey high-level messages on sustainability, including climate-related financial risks (the CBI met with banks on their sustainability reports). The CBI is considering sustainable finance as a supervisory priority for the financial sector in the medium term, as noted in the 2022–24 Supervisory Strategy released in August 2022<sup>18</sup>. The central bank's strategic supervisory approach is wide, covering ESG risks and the whole financial sector, yet without detailing short-term objectives. However, the last annual report on Financial Supervision<sup>19</sup>, disclosed in March 2023, does not mention sustainable finance anymore as a key priority objective for 2023. This implicit downgrade may undermine the visibility of the CBI's actual commitment to upgrade financial supervision of climate-related financial risk over a medium-term horizon. The CBI's Financial Stability Committee in December 2022 received a presentation on climate-related financial risks, while the Financial Stability Council<sup>20</sup> has not yet discussed it.

<sup>14</sup> MoFEA Sustainable Finance Framework (April 2023): <https://www.government.is/library/Files/2023-04-28%20Iceland%20Sovereign%20Sustainable%20Financing%20Frameworkvefurpdf.pdf>.

<sup>15</sup> CBI Individual Pledge for COP26 (November 2021): [211103\\_NGFS COP26 Pledge Central Bank of Iceland EN.pdf \(cb.is\)](https://www.cb.is/library/Skraarsafn---EN/Sustainability_report_2021.pdf).

<sup>16</sup> For example, see the following statement by the CBI Deputy Governor for Financial Stability (November 2021): [ngfs in conversation with central bank of iceland gunnar jakobsson final.pdf](https://www.cb.is/library/Skraarsafn---EN/Financial-Supervision-Committee/Supervisory%20Strategy%202022-2024-final%20(002).pdf).

<sup>17</sup> CBI 2021 Sustainability Report: [https://www.cb.is/library/Skraarsafn---EN/Sustainability\\_report\\_2021.pdf](https://www.cb.is/library/Skraarsafn---EN/Sustainability_report_2021.pdf).

<sup>18</sup> CBI Supervisory Strategy 2022–2024: [https://www.cb.is/library/Skraarsafn---EN/Financial-Supervision-Committee/Supervisory%20Strategy%202022-2024-final%20\(002\).pdf](https://www.cb.is/library/Skraarsafn---EN/Financial-Supervision-Committee/Supervisory%20Strategy%202022-2024-final%20(002).pdf).

<sup>19</sup> CBI 2023 Report on Financial Supervision: [https://www.cb.is/library/Skraarsafn---EN/Financial-Supervision-Committee/Financial%20Supervision\\_2023\\_Final.pdf](https://www.cb.is/library/Skraarsafn---EN/Financial-Supervision-Committee/Financial%20Supervision_2023_Final.pdf).

<sup>20</sup> The Financial Stability Council enables cooperation between the MoFEA and the CBI on financial stability issues of macro-critical importance that may possibly impact the financial system at country level.

**22. The implementation strategy and (external and internal) action plans specific to climate-related financial risks within the banking sector remain to be developed further by the CBI.** This is taking into consideration the expected issuance of final international standards and EU/EBA regulations that will be applicable to Iceland, for instance, regarding financial disclosure of climate-related financial risks. On March 15, 2023, during the FSAP mission, the CBI released the latest edition of the Financial Stability Report (FSR)<sup>21</sup>, including an informative box on the impact of climate risk on the Icelandic banks' credit risk, focusing on the GHG emissions' footprint of corporate loans. The FSR contains selected data and charts that spotlight the outcome of a first scenario analysis performed by the CBI in 2022 (see illustration in Chapter 2).

**23. The Central Bank of Iceland mostly relies on the European regulatory framework and guidance pertaining to climate-related financial risks, whose implementation should be tailored to the country's specific needs.** As a member country of the European Economic Area (EEA), Iceland incorporates and transposes EU legislation that falls under the EEA agreement. As a general rule, regarding banking regulation and supervision, the Icelandic authorities incorporate EEA-relevant EU/EBA regulation into national legislation to make it enforceable and applicable by regulated financial institutions. Therefore, the Icelandic banking law (Act No. 161/2002 on Financial Undertakings) is almost entirely based on European regulation. EU regulations, as well as EBA standards and guidelines, are not tailored to Iceland's specifics (see the separate Detailed Assessment Report on the BCP assessment). The EBA's guidance on supervision, management, and disclosure of climate-related financial risks is under development, and it should be finalized for implementation in the near term (Chapter 3). The Icelandic authorities should apply the principle of proportionality when determining their implementation strategy of EU/EBA regulations.

**24. The existing legal mandate of the Central Bank of Iceland is adequate for implementing supervision of climate-related financial risks within the financial sector.** The CBI has the advantage of being in charge of financial stability (macroprudential oversight and stress testing), prudential supervision (individual surveillance of regulated financial institutions), and conduct supervision (including consumer protection), covering the whole financial sector, including banks, insurance companies, pension funds, and securities markets. Such an institutional setup should enable the CBI to perform its legal supervisory mandate on climate-related financial risks. Nevertheless, it is important that supervisory priorities are balanced in a way that would enable the CBI to fulfill its mandate for oversight of climate-related financial risks without undermining its main mandate when acting as the financial supervisory authority, ensuring the financial stability and soundness of the banking sector.

**25. The internal organizational framework of the Central Bank of Iceland on climate-related financial risks is being progressively structured, but limited resources are a challenge.** As the organizational structure of climate work is being put in place, the scope of financial stability and supervision is being broadened to cover the climate workstream. But limited human resources

<sup>21</sup> CBI Financial Stability Report (2023/1), pages 35–38: [https://www.cb.is/library/Skraarsafn---EN/Financial\\_Stability/2023/Financial\\_Stability\\_2023\\_1.pdf](https://www.cb.is/library/Skraarsafn---EN/Financial_Stability/2023/Financial_Stability_2023_1.pdf).

are a major constraint. For illustration, two specialists in prudential supervision and financial stability dedicated to this new supervisory mission are working part-time on climate issues, with some support from other specialists and supervisors. By end-March 2023, the CBI hired a new climate expert who is working full-time on climate related financial issues. The CBI's organizational structure on adaptation is a work in progress and at a preliminary stage. The FSAP mission team has not received any documentation on internal action plans, at least for banking supervision, including specification of roles and responsibilities, objectives, human resources/staffing, and budget (Chapter 4). The CBI's management of the reform relating to building the supervisory framework on climate-related financial risks appears informal so far, and it would benefit from better structuration and dedicated internal infrastructure, using project management techniques.

**26. Within the limit of its resource constraint, the Financial Supervisory Authority of the Central Bank of Iceland has started to incorporate climate-related financial risks into supervisory policies and processes.** Since January 2023, climate change has been incorporated into the work scope of the department in charge of financial stability and the two departments in charge of financial supervision (Prudential Supervision and Conduct Supervision). Preparatory work on the implementation of EBA standards and guidelines is underway, and a first scenario analysis has been performed by the Financial Stability Department. The Prudential Supervision Department has already implemented several supervisory tasks pertaining to climate change, notably during the annual SREP of larger banks performed in 2022 (Chapter 4). Nonetheless, internal supervisory procedures and processes have not yet fully incorporated all the supervisory tasks on climate-related financial risks. Procedures will also have to be detailed after EBA standards and guidelines on ESG/climate have been finalized, which may take some time. In the meantime, it would be useful to draft transitional simplified procedures, focusing on core supervisory tasks that may already be implemented through regular supervisory processes.

**27. The FSAP assessment shows that the supervisory response to climate-related financial risks needs to be significantly developed with additional resources.** Notwithstanding the CBI's commitment to financial supervision of climate-related financial risks, the overall outcome of the current assessment reflects the early stage of effective implementation within the banking sector. Besides, in the context of limited human resources within the central bank's Financial Supervision Authority, increased staffing and expertise are required in order to reach effective and adequate banking supervision objectives in that domain over a reasonable medium-term horizon (Chapter 4).

**28. Concomitantly, larger banks on their own are developing risk management and disclosure of climate-related financial risks.** The Icelandic banking sector is concentrated, with three banks classified as domestic systemically important banks (D-SIBs) and representing most of the banking sector. Larger banks have effectively considered disclosure requirements of climate-related financial risks through various processes, notably the disclosure of ESG reports, enhanced Basel Pillar 3 disclosure reports (including ESG risks), and ESG rating by an external rating agency. These are commendable initiatives, though uneven among banks. Accuracy of disclosure, and

adequacy of risk management, of climate-related financial risks within larger banks remains to be assessed by the CBI through supervisory processes (Chapter 3).<sup>22</sup>

## D. Cooperation and Information Sharing Arrangements Involving Financial Supervision Authorities

**29. The Central Bank of Iceland participates in international cooperation arrangements on climate change-related issues.** Notably, the CBI has been a member of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) since 2020. The CBI is also part of various supervisory cooperation agreements with other Nordic countries.<sup>23</sup> A senior risk expert on climate rejoined the CBI in 2022 after a secondment at the EBA in the same capacity. Domestic climate change cooperations between the CBI and other Icelandic agencies may be in place but are informal.

**30. Given limited cross-border banking activities, coordination with foreign supervisory authorities has not been a priority.** Bilateral memoranda of understanding (MoUs) between the CBI and several foreign banking supervision authorities are in place. To date, there has been no real need to use them for specific supervision of financial institutions (except for one case), given the limited number of cross-border entities within the banking sector.

**31. Banking institutions are directly involved in various international and domestic cooperation initiatives on sustainability.** Such participation has been mentioned by larger banks in their financial disclosure on sustainability for 2022.<sup>24</sup> It presents commendable opportunities to converge action by regulated banks and banking supervisors toward sustainable finance.

## E. Recommendations

**32. Produce a global assessment of climate-related financial risks within the financial sector to identify actual and potential vulnerabilities.** The Icelandic authorities, involving the CBI, should develop the risk assessment of physical and transition risks within the whole financial sector (including the banking sector, insurance companies, and pension funds, specifically).

**33. Clarify the expected role and contribution of the CBI and the financial sector to implement the 2020 Iceland's Climate Action Plan and 2021 Iceland's Strategy on Adaptation**

<sup>22</sup> Assessment of risk management and disclosure of climate-related financial risks by insurance companies and pension funds have been left out of the scope of the FSAP mission.

<sup>23</sup> See the BCP's Detailed Assessment Report, developed as part of this FSAP.

<sup>24</sup> For illustration, Islandsbanki: <https://www.islandsbanki.is/en/product/about/cooperation-on-sustainability>. This bank indicates that it cooperates with the following institutions and initiatives: Task Force on Climate-Related Financial Disclosure (TCFD); United Nations Global Compact, including CFO Coalition for the Sustainable Development Goals (SDGs); United Nations Environmental Programme—Financial Initiative (UNEP-FI); UN Principles for Responsible Investment (PRI); the Partnership for Carbon Accounting Financials (PCAF); Iceland Sustainable Investment Forum (SIF); the Nordic CEOs for a Sustainable Future; and the Net-Zero Banking Alliance (NZBA). Besides, Landsbankinn indicates the same references in its sustainability policy. So does Arion Banki on its webpages on responsible banking and sustainability accounts.

**to Climate Change at the country level.** The role of the financial sector (the banking sector and also insurance companies and pension funds) should be better reflected in the governmental strategic roadmap for addressing issues resulting from climate change at the country level.

**34. Enhance domestic cooperation of the CBI with relevant ministries and public agencies involved in climate change issues to develop synergies supporting effective and efficient supervision of climate-related financial risks within the financial sector (including banks).** The CBI should be involved and participate more intensively in coordination arrangements among authorities at the national level (for instance, the MoEEC, or the Icelandic Climate Council). The aim is to develop synergies that may help build an effective and efficient framework of supervision of climate-related financial risks within the financial sector, notably the banking sector (for instance, regarding data classification, production, and disclosure).

**35. Tailor the implementation of the EU/EBA regulatory framework considering Iceland's specific climate change issues to ensure adequate and proportionate supervision of climate-related financial risks within the banking sector.** In addition to a general recommendation<sup>25</sup>, the Icelandic authorities, notably the CBI, should determine a tailored and proportionate implementation policy of the detailed EU/EBA regulatory framework on climate-related financial risks. Considering Iceland's specific climate change issues, these should be adapted to the unique banking sector and supervisory needs. Supervisory guidance for banks should explicitly state supervisory expectations.

**36. Specify a comprehensive CBI supervisory strategy, including a structured action plan to build an adapted supervisory framework on climate-related financial risks within the financial sector.** The CBI should adopt a global roadmap on supervision of climate-related financial risks, at least within the banking sector, including relevant strategic objectives, action plans, expected outcomes, responsibilities, and resources. The management of this reform should be more clearly structured.

**37. Assess the need for additional CBI staff, expertise, tools, and budget to ensure appropriate supervision of climate-related financial risks within the financial sector.** The CBI should make a forward-looking estimate of additional needs of staffing and expertise, and subsequent funding, targeting a fully operational supervisory framework on climate-related financial risks within the next three to five years. The scope should include banks, insurance companies, and pension funds, as well as macroprudential oversight, offsite supervision, onsite inspection, and other duties. The CBI should request an additional multiyear budget from the appropriate authorities to meet these needs.

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<sup>25</sup> See the BCP's Detailed Assessment Report developed as part of this FSAP.



## OVERVIEW OF THE BANKING SECTOR'S EXPOSURE TO CLIMATE-RELATED FINANCIAL RISKS

**38. This chapter includes a limited quantitative illustration of the overall exposure of Iceland's banking sector to climate-related financial risks.** A quick overview of larger banks' exposure to physical and transition risks is tentatively drawn from available data. The chapter does not make any risk assessment of the banking sector regarding climate-related financial risks, nor develop any quantitative analysis of the impact of climate change on banks, nor aim to measure banks' vulnerabilities to climate-related financial risks.

**39. Iceland's collection of data on climate-related financial risks is an ongoing process in the global context of progressive setup and implementation of standardized taxonomy and classification criteria.** Collecting data to draw a big picture of larger banks' exposure to climate-related financial risks has been challenging for a number of reasons, including (1) the lack of enforceable international standards for banks, issued by standard setters and the EU/EBA, for financial disclosure of climate-related financial risks; (2) the ongoing process of setting such standards at the European and euro area levels, resulting in the Icelandic authorities' waiting before they can enforce a disclosure framework at the national level; and (3) the lack of public information and data on climate-related financial risks in Iceland at the time of the mission. Therefore, this technical note includes ad hoc data shared by the Central Bank of Iceland during the mission, with approval by the CBI. The development of a structured taxonomy and data reporting framework on climate-related financial risks in the banking sector is ongoing and will consider the EU Taxonomy Regulation (to be transposed by the Icelandic Parliament in 2023), as well as future EBA guidelines whose issuance is expected in 2023 (see Chapter 2 on disclosure).

**40. Disclosure by regulated financial institutions and the Central Bank of Iceland of data on climate-related financial risks was informative in 2022 but could be enhanced.<sup>26</sup>** Recommendations for improvement are included in Chapter 3.

**41. Banks may be exposed to significant credit risks stemming from climate-related physical risks generated by customer insolvency directly caused by damages resulting from climate change.** Such direct exposure of banks to counterparties that may be impacted by climate-related physical risks may come from specific sectors, such as real estate, agriculture, and fisheries. No aggregate data have been available from public sources yet. Banks have disclosed separately in the Pillar 3 reports, using uneven templates, data on their own exposure for 2022. In March 2023, the CBI released the Financial Stability Report, which shows that commercial banks' corporate credit portfolios (only loans above ISK 300 million) were composed of 75 percent of "green" loans, 16 percent of "neutral" loans, and only 9 percent of "brown" loans, in terms of GHG emissions' footprint.

<sup>26</sup> Appendix IV includes a list of hyperlinks to the 2022 financial disclosure on sustainable finance (covering, among others, ESG risks and other climate-related financial risks) published by the three larger Icelandic banks, that is, Arion Banki, Islandsbanki, and Landsbankinn, for illustration.

This breakdown is derived from data available from the Credit Registry, the CBI database of bank loan portfolios. The CBI has not assessed the quality and reliability of data reported by banks to the Credit Registry on classification of the loans to various corporate sectors, nor green loans. Besides, banks do not have granular data for measuring the GHG emissions' efficiency of immovable real estate collateral, which is an EU requirement for climate-related classification of exposure.

**42. Icelandic banks may be relatively less exposed than other countries to credit risks resulting from climate-related transition risks,** given the country's risk profile and ambitious Climate Action Plan. However, so far, no reliable standardized data are available for relevant quantification of banks' exposure to transition risks.

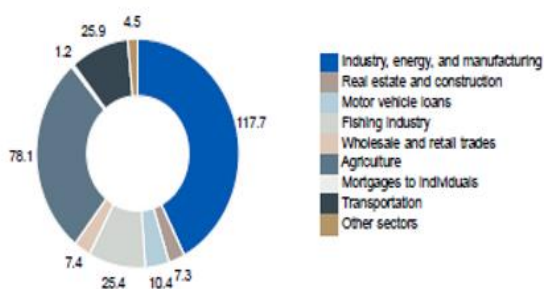
**43. Identification and measurement of banks' exposure to other kinds of financial risks generated by climate-related physical and transition risks has yet to be finetuned.** No aggregated public data are available on banks' climate-related market risk exposure. Figure 1, though, provides an illustration of banks' exposure to climate-related transition risks. Excerpts from the 2022 financial disclosure of the three larger banks (Arion Banki, Islandsbanki, and Landsbankinn) present some informative data, which are, however, not comparable. For instance, banks are able to calculate the ratio of carbon-related assets to the total loan book (37 percent for Arion Banki).

**44. The Central Bank of Iceland produced a first scenario analysis whose outcome was released on March 15, 2023, during the FSAP mission (Figure 2).** The Financial Stability Department conducted the analysis, focused on the impact of climate change on credit risks, covering banks' corporate loans portfolios. Data used by the CBI to make this first kind of simulation exercise have not been shared with the mission, but the central bank finally shared several dashboards made by the Financial Stability Department. CBI used mostly data from the Credit Registry. Figure 2 shows charts disclosed by the CBI in the Financial Stability Report (2023/1) and includes a global estimate of green corporate loans (a high proportion of total loans) and results of the three climate scenarios. Figure 3 provides selected quantitative elements on banks' exposure to climate-related financial risks based on internal dashboards and data shared by the CBI.

**Figure 1. Iceland: Illustration of Larger Banks' Exposure to Climate-Related Transition Risks**

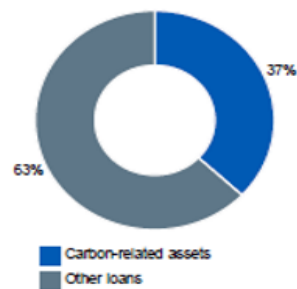
Arion Banki: Financed CO<sub>2</sub> emissions due to the loan book in 2021, by sector

**Arion Bank's Financed Emissions [ktCO<sub>2</sub>e] Due to the Loan Book in 2021**



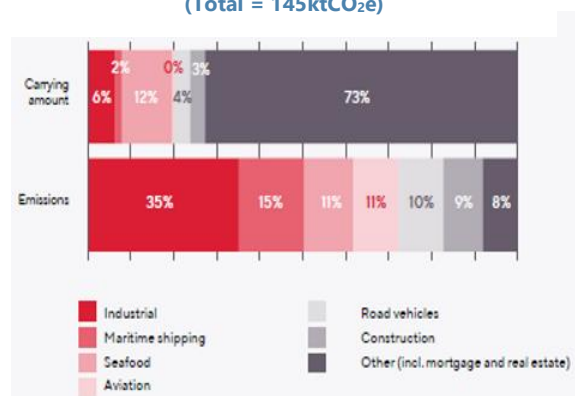
Arion Banki: Ratio of carbon-related assets to the total loan book at year-end 2022

**Ratio of Carbon-related Assets to the Total Loan Book at Year-end 2022**



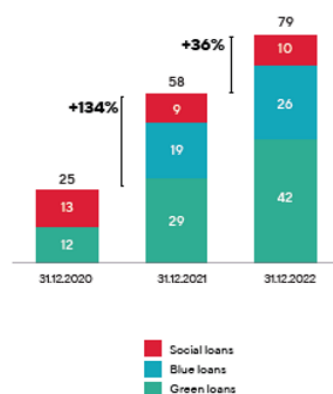
Islandsbanki: Emissions from balance-sheet activities in 2021

**Emissions from Balance Sheet Activities in 2021 Sector Split by Amount and Emissions (Total = 145ktCO<sub>2</sub>e)**



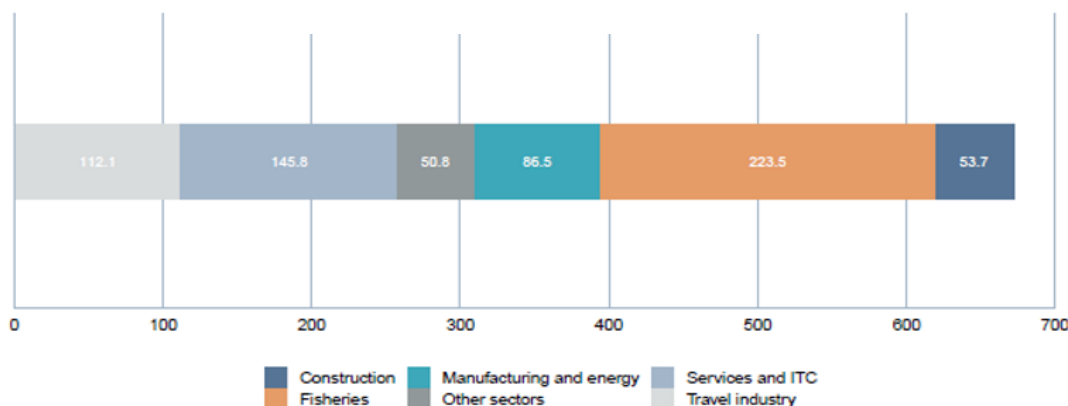
Islandsbanki: Sustainable assets at year-end 2020-22

**Sustainable Assets at Year-end (ISK billion)**



Landsbankinn: GHG emissions from the loan portfolio by year-end 2022

**GHG Emissions from the Loan Portfolio in ktCO<sub>2</sub>e**

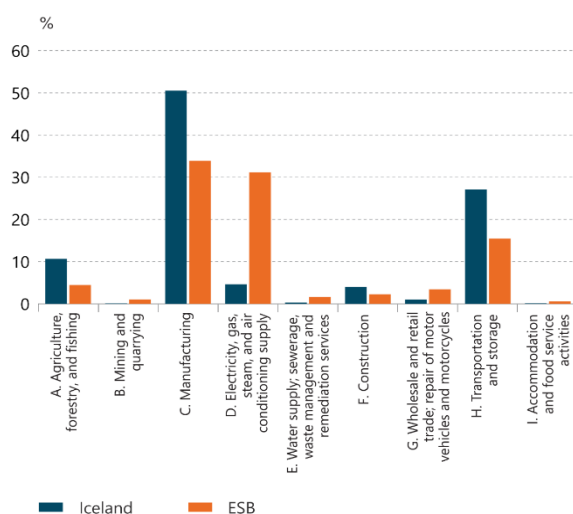


Source: Banks' 2022 financial disclosure.

## Figure 2. Iceland: The CBI's Snapshot of Results of the CBI's Scenario Analysis on Banks' Exposure to Climate-Related Credit Risks

Sectoral emissions are concentrated.

### Comparison of Proportional Emissions in Iceland and the EU in 2021, by Sector<sup>1</sup>



1. Carbon emissions, scope 1  
Source: Eurostat.

Sectoral share of brown corporate loans is high on fisheries.

### Brown Corporate Loans in Year-end 2021

NACE Sector	Share of brown loans	Share of total corporate loans
A03 Fishing and aquaculture	80.0%	7.2%
H50 Water transport	10.2%	0.9%
C24 Manufacture of basic metals	4.4%	0.4%
Other brown sectors	5.4%	0.5%
Total		9.0%

Source: Central Bank of Iceland.

Green loans account for 75 percent of total corporate

### Breakdown of Commercial Banks' Corporate Loans by Type: Green, Neutral, and Brown

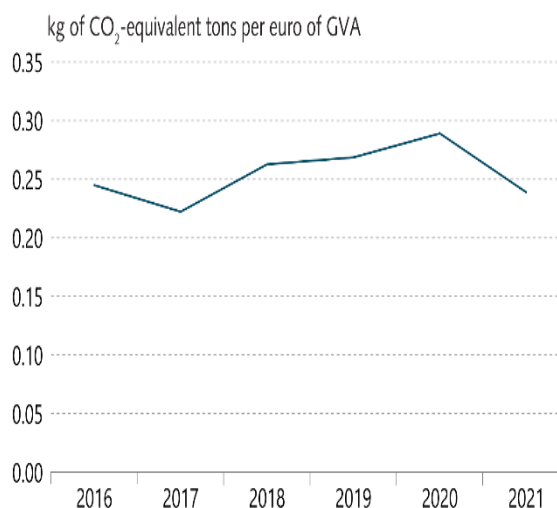
B.kr	Book value	Share, %
Green loans	1,357	75%
Neutral loans	289	16%
Brown loans	164	9%
Total	1,809	

Source: Central Bank of Iceland.

Source: CBI (Financial Stability Review, 2023/1).

Loan carbon intensity has been estimated.

### Loan Weighted Carbon Intensity of Icelandic Banks (2016-2021)



Sources: Eurostat, Statistics Iceland and Central Bank calculations.

Sectoral share of neutral corporate loans is high on manufacture of food products.

### Neutral Corporate Loans in Year-end 2021

NACE Sector	Share of neutral loans	Share of total corporate loans
C10-C12 Manufacture of food products	64.9%	10.4%
F41 Construction of buildings, development of building projects	16.1%	2.6%
G45 Wholesale and retail trade; repair of motor vehicles and motorcycles	5.8%	0.9%
Other neutral sectors	13.2%	2.1%
Samtals		16.0%

Source: Central Bank of Iceland.

Results of the 3 climate scenarios have been evaluated.

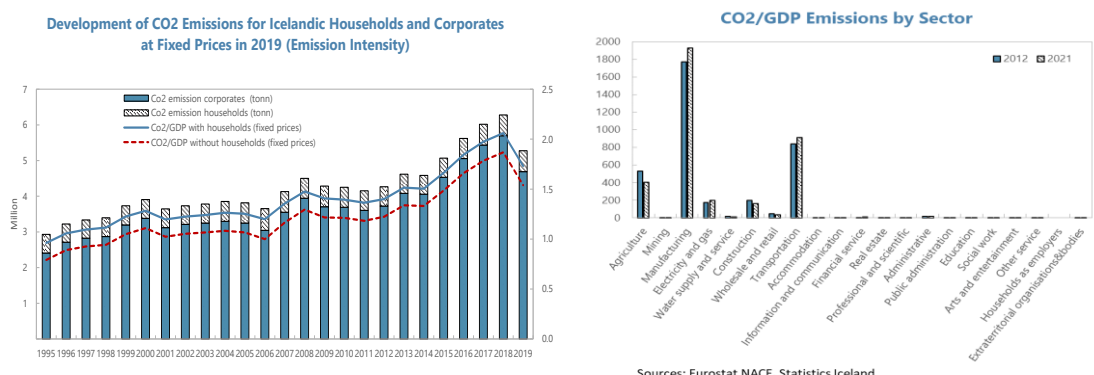
### Climate Transition Expected Return (CTER)

B.kr	Book value	CTER	Loss
Hot house world	1,357	-0.0081	-11
Orderly transition	289	-0.0012	-0,3
Disorderly transition	164	-0.0081	-1,3

Sources: Ojea-Ferreiro, J., Reboredo, J.C. and Ugolini, A. The impact of climate transition risks on financial stability. A systemic risk approach. JRC Working Paper in Economics and Finance, 2022/1. Joint Research Centre.

**Figure 3. Iceland: Transition Risks Arising from Climate Change**

CO2 emissions are concentrated in a few sectors in Iceland, and bank loans already look largely green.



Sources: Eurostat NACE, Statistics Iceland

**Banks' Exposures to Climate-related Transition Risks**

Classification of exposures (CO2/GDP split)	Book value of exposures (Icelandic krona million)	Percent of total exposures	Book value of non-performing exposures (Icelandic krona million)	Percent of total non-performing exposures	Number of non-performing counterparties	Expected losses in the next 12 months (Icelandic krona million)
<b>Green</b>	1,357,092.44	75.00	30,130.85	89.48	2,218	12,288.69
<b>Neutral</b>	288,633.55	15.95	2,740.24	8.14	287	838.47
<b>Brown</b>	163,687.67	9.05	802.96	2.38	141	636.72
<b>Total</b>	1,809,413.65	100.00	33,674.05	100.00	2,646	13,763.87

Source: CBI

Notes: Green, brown and neutral industries are based on air emission accounts. Air emission accounts by Statistics Iceland NACE1 = ISAT1 and further accounts by NACE2 = AEA groups.

## SUPERVISORY REPORTING AND FINANCIAL DISCLOSURE OF CLIMATE-RELATED FINANCIAL RISKS WITHIN THE BANKING SECTOR

**45. This chapter includes a high-level overview of the Icelandic banks' data reporting and disclosure framework on climate-related financial risks.** Implementing the disclosure framework is important for developing sound risk management and effective banking supervision. Typology and taxonomy of climate-related financial risks are still being discussed by standard setters at the international level and within the EU, in view of reducing data gaps and developing the best possible standardized framework of relevant data. Besides, the Basel Committee has supported the proposal to develop a Pillar 3 disclosure framework on climate-related financial risks, which should build on and complement parallel disclosure initiatives under development by the International Sustainability Standards Board (ISSB). The Task Force on Climate-Related Financial Risk (TCFR) of the Financial Stability Board (FSB) will develop a set of bank-specific Pillar 3 disclosure requirements.

**46. In the meantime, rules and practices of financial disclosure by regulated banking institutions, as well as regulatory reporting requirements for supervisors, are also under development,** or have been recently specified. This chapter evaluates the current framework of applicable European requirements on taxonomy and financial disclosure (Section A), supervisory reporting (Section B), and supervisory disclosure (Section C), pertaining to climate-related financial risks and relevant to Iceland.

### A. Applicable European Requirements on Taxonomy and Financial Disclosure Pertaining to Climate-Related Financial Risks

**47. As an EEA member country, Iceland implements EU and EBA norms<sup>27</sup> on ESG risks that incorporate climate-related financial risks.** The EU and EBA have developed regulations on ESG risks in recent years. Iceland's policy on banking regulation and supervision is incorporating relevant EU/EBA rules and guidance into Icelandic law to give them binding legal status, without tailoring these norms specifically to Iceland. Therefore, Icelandic supervisory authorities benefit from the strong regulatory effort on ESG provided by the European authorities, notably the EBA, including benchmarking with other EEA member countries. Conversely, direct implementation of EU/EBA rules and guidance would require mobilizing significant additional resources from the CBI and banks to comply with such comprehensive and thorough regulatory framework after it has become fully applicable over the near-term horizon. At the time of the FSAP mission (March 2023), effective implementation of EU guidelines and regulations specific to taxonomy and disclosure of ESG risks was at an early stage. For instance, legal adoption of the EU taxonomy regulation was underway, with

<sup>27</sup> Appendix II provides a tentative list (with references to documents from public sources) of EU directives and regulations, as well as EBA standards and guidelines, pertaining to ESG and therefore to climate-related financial risks. The EU and EBA norms are applicable to Iceland.

implementation expected by mid-2023. It was therefore premature to present a preliminary conclusion on the outcome of new disclosure requirements, apart from underscoring the implementation challenges resulting from the complexity of EU rules.

### Box 2. Overview of EU Norms (NFRD, TR, SFDR, CSRD)

**On climate-related financial risks, EU directives and regulations have notably developed norms on taxonomy and sustainable finance disclosure applicable to financial institutions, including banks.**

Four main norms have been recently issued or amended by European Institutions to incorporate ESG risks into disclosure requirements applicable to the financial sector: (1) the Non-Financial Reporting Directive (NFRD); (2) the Taxonomy Regulation (TR); (3) the Sustainable Finance Disclosure Regulation (SFDR); and (4) the Corporate Sustainability Reporting Directive (CSRD), which amended the NFRD, including ESG risks and incorporating EU Sustainability Reporting Standards (ESRS).<sup>1</sup>

The main objectives of these detailed EU norms are to:

- “improve undertakings’ disclosure of social and environmental information” (NFRD);
- “establish the criteria for determining whether an economic activity qualifies as environmentally sustainable for the purposes of establishing the degree to which an investment is environmentally sustainable” (TR);
- “lay down harmonized rules for financial market participants and financial advisers on transparency with regard to the integration of sustainability risks and the consideration of adverse sustainability impacts in their processes and the provision of sustainability-related information with respect to financial products” (SFDR);
- “require all large undertakings and all undertakings, except micro undertakings, whose securities are admitted to trading on a regulated market in the Union to report sustainability information” (CSRD).

EU norms are expected to contribute to improving data availability, comparability, and consistency of disclosure of information and data on ESG exposures and risks, as well as sustainability reports, at least for most significant financial institutions.

<sup>1</sup> See the overview of the EU regulatory strategy in the factsheet on the EU Sustainable Finance “Package” (April 2021): [https://finance.ec.europa.eu/system/files/2021-04/sustainable-finance-communication-factsheet\\_en.pdf](https://finance.ec.europa.eu/system/files/2021-04/sustainable-finance-communication-factsheet_en.pdf).

**48. European norms on ESG disclosure by banks should be implemented while international standards on climate-related financial risks are going to be issued by the TCFD and the ISSB.** International standards on accounting and financial disclosure of climate-related financial risks applicable to the banking sector are under development by several international standard setters. They have a specific mandate covering a wider scope of the financial sector (FSB) and nonfinancial companies (ISSB), including (1) the Task Force on Climate-Related Financial Disclosures (TCFD)<sup>28</sup>, operating on behalf of the FSB; and (2) the International Sustainability

<sup>28</sup> TCFD website: <https://www.fsb-tcfid.org/>.

Standards Board (ISSB)<sup>29</sup>, operating under the IFRS Foundation. Combination and harmonization of all outcomes produced by the international standard setters and European Institutions may take some more time before Iceland can ensure adapted implementation of the disclosure requirements. This includes consistent data on climate-related financial risks in the banking sector.

**49. The EBA has developed implementation standards and guidelines for ESG risks, covering climate-related financial risks.** In recent years, intense preparatory work has been conducted by the EBA to incorporate climate-related financial risks into existing guidelines (such as, on governance, or credit risks). The SREP has been upgraded, including ESG risks. Further specific norms are under development, or have not yet been enforced, including (1) the 2021 EBA Report on management and supervision of ESG risks for credit institutions and investment firms; and (2) the 2022 Implementing Technical Standards (ITS) on prudential disclosures on ESG risks. The EBA standards build on the recommendations of existing initiatives, such as the TCFD, and include granular templates, tables, and instructions aimed at ensuring consistency and comparability of disclosures by institutions.<sup>30</sup> The CBI has already considered the revised EBA SREP guidelines when implementing the 2022 SREP of larger Icelandic banks. It incorporated ESG risks into the assessment of governance and business model analysis.

**50. Regulatory requirements for banks' financial disclosure have been enhanced since 2022 with the Pillar 3 report, including ESG risks.** The annual Pillar 3 report that banks are expected to publish should comply with EU Regulation 2021/637 (amended in 2022 to include ESG risks) on disclosure requirements<sup>31</sup> under Part Eight of the Capital Requirements Regulation (CRR). The new Pillar 3 report should present information and data in accordance with the disclosure requirements in the form of standardized tables and templates. The report is intended to allow market participants to assess key information on capital, risk exposures, risk assessment processes, and hence capital adequacy, incorporating an ESG perspective. The CBI has not yet assessed banks' 2022 Pillar 3 reports, but the assessments are planned to be one of the first concrete supervisory tasks to implement from a microprudential supervision perspective.

<sup>29</sup> ISSB website: <https://www.ifrs.org/groups/international-sustainability-standards-board/>.

<sup>30</sup> EBA announcement (January 2022): [EBA publishes binding standards on Pillar 3 disclosures on ESG risks | European Banking Authority \(europa.eu\)](#).

<sup>31</sup> [Appendix III](#) provides a visual snapshot of ESG disclosure obligations relevant to financial institutions (source: EBA).



### Box 3. Key Aspects of EBA Disclosure Requirements for Banks

#### The EBA is asking banks to disclose information on:

- **Climate risks:** how climate change may exacerbate other risks within banks' balance sheets, whether it is the risk of stranded carbon intensive assets or loans to property within a flood plain.
- **Mitigating actions:** what mitigating actions banks have in place to address those risks, including financing activities that reduce carbon emissions.
- **Green Asset Ratio** and **Banking Book Taxonomy Alignment Ratio:** to understand how institutions are financing activities that will meet the publicly agreed Paris Agreement objectives of climate change mitigation and adaptation based on the EU taxonomy of green activities. The EBA is also asking banks to describe their ESG strategies, governance, and risk management arrangements with regard to ESG risks.

#### The EBA will ask banks to disclose exposures to carbon-intensive activities and assets that may experience physical risks as a result of climate change. In particular, it will ask banks to provide information with the following breakdown:

- Information toward **fossil fuel companies** excluded from sustainable climate benchmarks.
- Information toward **other carbon-related sectors**, as identified in the same sustainable climate benchmark regulation.
- Information on **GHG emissions** financed by the institution and on alignment of metrics with 2050 Net Zero goals.
- These disclosures are aligned with those recommended by the FSB's TCFD, like, e.g., exposure to carbon-related sectors, although with a broader definition of which sectors are carbon-related. Banks are also encouraged to explain what measures they have in place to mitigate those risks, such as reducing financing activities that reduce the carbon footprint of currently carbon-intensive activities.

#### Where will banks get the data?

The EBA has deliberately designed the key performance indicators (KPIs) on taxonomy alignment disclosure requirements so that they match the data, and timelines, that large corporates under the Non-Financial Reporting Directive are required to produce, according to Article 8 of the Taxonomy Regulation. The EBA also set out guidance that banks should capture ESG information in EBA Guidelines on Loan Origination and Monitoring. Information necessary for the calculation of the Banking Book Taxonomy Alignment Ratio (BTAR) shall be obtained on a best-effort basis in the context of the bilateral relationship with counterparties or when needed, using estimates, without creating disclosure obligations to them. The EBA expects reliable data for the Green Asset Ratio (GAR) from December 2023 for counterparties subject to NFRD disclosure obligations and households, and on the BTAR for June 2024.

Source: EBA, Factsheet on Environmental, Social, and Governance Pillar 3 Disclosures (2021)  
[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/News%20and%20Press/Communication%20materials/Factsheets/1026177/EBA%202021.5984%20ESG%20Factsheet%20update2.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/News%20and%20Press/Communication%20materials/Factsheets/1026177/EBA%202021.5984%20ESG%20Factsheet%20update2.pdf).

**51. Given the ongoing development of international standards and upcoming applicability of EU/EBA rules on financial disclosure of climate-related financial risks, the annual Pillar 3 reports are not supplemented by additional specific Icelandic legislation.** The Annual Accounts Act has recently required that pension funds, credit institutions, and insurance firms include a discussion of environmental, social, and human resources in their annual reports. These organizations must publish a summary of their policy results in these areas, along with a description of the key risks associated with their activities as well as their responses to such risks. Nonetheless, regarding banking supervision, the authorities are waiting for the release of the final standards and rules in that domain before incorporating them into a national legislation with the corresponding binding status. No tailoring of EBA disclosure requirements has been planned for Iceland, and no impact study has been conducted by the banking supervisors accordingly. Although larger banks have started to implement Pillar 3 ESG disclosure requirements, by publishing ESG reports in 2022, CBI supervisors have not yet assessed the alignment of these banks' disclosure with the EBA's expectations. It is too early for the FSAP mission to produce any relevant global assessment of the adequacy of financial disclosure of climate-related financial risks by banks.

## B. Supervisory Reporting on Climate-Related Financial Risks

**52. The Central Bank of Iceland has not issued any specific regulatory reporting requirements for climate-related financial risks.** Beyond existing (and expected) EU rules on financial disclosure and EBA standards on regulatory disclosure, the CBI has not determined whether additional reporting requirements would be useful at the national level. It has also not determined whether or not to tailor banking supervision and macroprudential oversight to any Icelandic specificity regarding climate-related financial risks within the banking sector. Determining the need for such reporting may be relevant once a country risk assessment on climate change has been made, including an impact analysis on the Icelandic banking sector. Besides, the CBI has not issued regulatory templates for periodic standardized reporting, or ad hoc reporting, to banking supervisors in charge of macroprudential oversight and microprudential supervision, pertaining to climate-related financial risks.

**53. The use of key indicators for climate-related financial risks within the Icelandic banking sector is not yet part of supervisory processes.** As indicated in Box 2, quantitative and qualitative KRIs and KPIs have been developed by the EBA, among which is the Green Asset Ratio (GAR) which will come into force by end-2023. At the time of the FSAP mission, CBI supervisors had not yet adopted an implementation policy nor issued guidance to banks for calculation. Such preparation of KRI/KPI reporting should take place during 2023, involving both the CBI and banks, to meet the EBA deadline.

## C. Supervisory Disclosure on Climate-Related Financial Risks

**54. The Central Bank of Iceland has not disclosed much information on climate-related financial risks within the banking sector.** In addition to the publication of official statements of commitment, the 2021 sustainability report; the 2022–24 supervisory strategy for the financial sector

in 2022, including a strategic objective on sustainable finance; and a box on climate-related credit risk included in the 2023/1 Financial Stability Report, the CBI has not yet specified short-term supervisory objectives on climate-related financial risks within the banking sector. Public information including quantitative data and qualitative analysis on banks' risk exposure and management is limited (only a few tables and charts are in the above-mentioned FSR).

## D. Recommendations

**55. Determine an action plan for effective implementation of EBA data disclosure and reporting standards for climate-related financial risks applicable to the banking sector to ensure reliable data quality and relevant data accuracy.** In liaison with relevant governmental authorities, and in concert with the banking sector, the CBI should clarify and specify internal and external objectives for timely and appropriate implementation of EU regulations and EBA standards and guidelines for financial disclosure and supervisory reporting focused on climate-related financial risks. It would be useful for the CBI to approve a dedicated roadmap including reasonable but concrete objectives, actions, outcome indicators, resources, and deadlines. That would help banks (at least, the three banks classified as D-SIBs) as well as supervisors develop adequate capacity to produce and examine the expected data in compliance with EU/EBA requirements. The principle of proportionality should be considered by the Icelandic authorities when implementing EU/EBA requirements for banks' data disclosure and reporting.

**56. Develop regulatory reporting templates and key monitoring indicators of climate-related financial risks within the banking sector for supervisory purposes.** The CBI needs to be equipped with relevant instruments to perform oversight and supervision effectively and to make decisions when required if banks' risk exposure and management are deemed inappropriate. Therefore, reporting templates and KRIs/KPIs should be developed, enforced, and used. Regulatory disclosure should be aligned with future EBA requirements applicable to banks, and possibly finetuned to highlight the specific climate-related risk environment of banks in Iceland.

**57. Ensure adequate financial disclosure of climate-related financial risks by banks.** In addition to banks' disclosure of public reports on sustainable finance and ESG risks, the CBI should ensure that banks' financial disclosure include more granular data and information on their exposure to, risk management of, and mitigation of climate-related financial risks, including physical and transition risks. The CBI should pay attention to enhancing financial disclosure by insurance companies and pension funds too, considering proportionality.

**58. Develop institutional supervisory disclosure by the CBI of relevant informative data and analysis of climate-related financial risks within the banking sector.** In addition to banks' financial disclosure, the CBI's supervisory disclosure of climate change-related issues would be useful. Data disclosure should prioritize the banking sector, given potential financial stability concerns, and also the insurance sector and pension funds. Data on physical and transition risks should be available. When preparation steps for effective oversight and supervision of climate-related financial risks are advanced enough, the CBI should disclose on its website periodic information on banks' risk

exposure, risk assessment, risk management, risk mitigation, and other relevant risk-based topics, including (1) aggregated data, as well as KRIs/KPIs; (2) supervisory stress test results; and (3) supervisory analysis and risk assessment. That would contribute to the transparency of the risk profile, management, and mitigation of the banking sector.

## MANAGEMENT AND SUPERVISION OF CLIMATE-RELATED FINANCIAL RISKS WITHIN THE BANKING SECTOR

**59. This chapter presents the mission’s evaluation of the implementation of the Basel Committee on Banking Supervision’s 2022 principles on climate-related financial risks within the banking sector.** The mission evaluated the effectiveness of the implementation of the BCBS’s 2022 “Principles on effective management and supervision of climate-related financial risks.” For the CBI’s convenience, principles 13–18, on supervision of climate-related financial risks, which apply to the CBI as the banking supervision authority of Iceland, are reviewed in Section A, followed by a review of principles 1–12, on risk management of climate-related financial risks, which apply to both the CBI and regulated banking institutions, in Section B.

**60. The evaluation is based on information provided by the Central Bank of Iceland,** mostly answers to the self-assessment questionnaire developed from the 2022 BCBS principles, and additional insights shared during the mission’s meetings by CBI staff, other authorities, and external stakeholders. The evaluation is based on information updated as of March 28, 2023.

### A. Supervision of Climate-Related Financial Risks

#### Responsibilities, Powers, and Functions of Supervisors

***Principle 17.** Supervisors should ensure that they have adequate resources and capacity to effectively assess banks’ management of climate-related financial risks.*

**61. The Central Bank of Iceland has an adequate mandate to oversee and supervise climate-related financial risks in the banking sector.** According to Act No. 161/2002 on Financial Undertakings, Act No. 87/1998 on Official Supervision of Financial Activities, and other relevant laws<sup>32</sup>, the CBI has adequate legal power to supervise regulated banks in all risk domains. Assessment of governance and risk management is part of the scope of banking supervision, and climate-related financial risks are included in the range of various risk domains that are being assessed, because of the transversal nature of such risks that may impact other domains (credit risks and liquidity risks, for instance). Though climate-related financial risks have not been explicitly added to legal provisions on risk management of other risk domains developed in Act No. 161/2002, it is

<sup>32</sup> See the separate BCP assessment for details on the legal framework.

clear that the CBI shall oversee and supervise the banking sector accordingly. The authorities plan to incorporate EBA standards and guidelines for climate-related financial risks into Icelandic law after their final version has been issued, expected in 2023 or 2024, as usually done for EU regulations and EBA norms.

**62. The Central Bank of Iceland’s strategic planning for implementing banking supervision of climate-related financial risks is barely structured.**

The CBI is gradually starting to work on the plan, using a pragmatic and informal approach that may be adapted to the moving regulatory environment in this domain. Preliminary work has started mostly at the technical level, with a few supervisors and experts acting on their own initiative with support from their directors. The CBI has not yet designed a formal strategic action plan for managing the implementation of the supervisory framework of climate-related financial risks, covering the comprehensive scope of internal and external issues. Therefore, the Financial Supervision Committee, nor the Financial Stability Committee, have not endorsed any plan. Advancing from the current light-touch approach to implementation toward a more structured strategic plan and reform management process would help address global implementation issues in the medium term and reach preconditions for effective and adequate supervision in a proportionate manner as soon as possible (for instance, tailoring data reporting requirements, ensuring reliable data production, coordinating with public agencies for relevant data collection).

**63. The Central Bank of Iceland’s organizational framework is gradually being adapted to the emerging workload, resulting from the central bank’s mission, under development, on oversight and supervision of climate-related financial risks.**

The CBI is promoting a transversal approach to supervision of the financial sector as a whole, as can be seen with the new organization chart decided in January 2023. The CBI created the Prudential Supervision Department and the Conduct Supervision Department, both of which handle microprudential supervision tasks, while the Financial Stability Department manages macroprudential surveillance and stress testing. Oversight and supervision of climate-related financial risks are handled within these three Departments. Interdepartmental cooperation within the CBI remains informal: there was no dedicated internal committee, specific unit, or single point of expertise in place during the mission, but a new climate expert was appointed at the Governor’s Office by late March 2023, which may introduce some structuration of the oversight of climate issues within the CBI.

**64. The Central Bank of Iceland has not estimated its anticipated need for additional supervisory resources and capacity for banking supervision of climate-related financial risks.**

By mid-March 2023, there were only two CBI specialists with relevant expertise in climate-related financial risks. As already mentioned, a new employee with climate-related expertise but no supervisory experience was hired during the mission. According to the CBI, a sustainable officer would also be hired in the Conduct Supervision Department. The CBI should develop greater internal expertise to be shared among a larger number of supervisors. Training and other actions to increase the awareness of CBI’s supervisors have not yet been organized. Additional staffing needs and expertise among financial supervisors for the next three to five years have not yet been precisely determined. These needs should be defined with consideration of the potential increase in

supervisory work that may globally result from effective oversight and supervision of climate-related financial risks. The CBI should also estimate multiyear budget needs in this domain to secure adequate funding to develop staff, expertise, tools, as well as proactive outreach communications.

**65. Though the Central Bank of Iceland has started working on climate-related financial risks, development of supervisory processes is only preliminary.** The CBI has started to engage with banks, notably during (1) the supervisory review and evaluation process (SREP), implemented in 2022 for the three larger banks; and (2) the first climate scenario analysis, in 2022–23. Oversight of climate-related financial risks has been incorporated into the scope of work for the Financial Stability Department and the two departments in charge of financial supervision (Prudential Supervision and Conduct Supervision). A first scenario analysis has been performed by the Financial Stability Department, with the outcome being an article published in the March 2023 Financial Stability Report (see footnote No 21). First steps of implementation of EBA standards and guidelines have been performed by the Prudential Supervision Department, mostly through the SREP work in 2022 during meetings with larger banks on various components of the risk assessment, notably governance and risk management. The FSAP mission has not reviewed confidential supervisory materials pertaining to the 2022 SREP. Internal supervisory procedures and processes will need to be adjusted once the regulatory framework has been stabilized and enforced. In the meantime, the CBI has some latitude to engage more deeply and broadly with various relevant stakeholders, including other authorities, to build a comprehensive and structured framework of regulation and supervision of climate-related financial risks. The framework would support governmental policies on climate change, as well as banks' efforts toward sustainable finance. Besides, collection of additional information and data from banks to develop analytical and supervisory work has also barely started.

**Principle 16.** *In conducting supervisory assessments of banks' management of climate-related financial risks, supervisors should utilize an appropriate range of techniques and tools and adopt adequate follow-up measures in case of material misalignment with supervisory expectations.*

**66. Supervisory expectations on management of climate-related financial risks have yet to be set, tailored to Iceland, and disclosed to banks.** By March 2023, the CBI had not yet disclosed supervisory expectations for effective, adequate, and proportionate implementation of standards for risk management and disclosure of climate-related financial risks, tailored to the Icelandic banking sector at the national level. Such disclosure is likely premature at the preliminary stage of the reform while the regulatory setup is not yet stabilized: (1) EU regulations on ESG disclosure have been issued and will become applicable in coming years; and (2) the EBA's issuance of standards and guidelines is ongoing, but they are not yet fully enforceable within the EU nor in Iceland. Banks are aware of publications and public drafts pertaining to the European regulatory framework. Yet, institutional communication by the CBI on the supervisory expectations and preparatory steps for smooth implementation has not started (for instance, no publication has been produced, and no outreach communication event has been held to raise the banking sector's awareness of climate-related financial risks).

**67. Supervisory tools and techniques on climate-related financial risks are under development.** The CBI is at the preliminary stage of creating supervisory procedures and processes, as well as designing IT tools, techniques, databases, and assessment methodology for oversight and supervision of climate-related financial risks within the banking sector. Progress is acknowledged as necessary but not planned in a systematic way. For instance, NGFS climate scenarios have been partially used (as the CBI indicated in the FSR) for a first impact assessment, and SREP meetings with banks have included climate change on their agendas. Further identification and design of supervisory tasks is needed, and a dedicated action plan to incorporate climate-related work, including priority ranking, into supervisory processes would be useful.

***Principle 18.** Supervisors should consider using climate-related risk scenario analysis to identify relevant risk factors, size portfolio exposures, identify data gaps and inform the adequacy of risk management approaches. Supervisors may also consider the use of climate-related stress testing to evaluate a firm's financial position under severe but plausible scenarios. Where appropriate, supervisors should consider disclosing the findings of these exercises.*

**68. The Central Bank of Iceland has implemented the first climate scenario analysis, whose outcome was disclosed in the March 2023 CBI Financial Stability Report.** During the FSAP mission, the CBI published an informative article on its climate scenario analysis in the FSR<sup>33</sup>, which focuses on a top-down analysis of climate-related financial risks (especially transition risks) on banks' credit portfolios—an analysis focused on corporate loans. The CBI mostly used available data from the Credit Registry, not data directly collected from banks. The CBI plans to expand this exercise to other types of risks in the next few years, and also to conduct a bottom-up exercise in cooperation with banks. As indicated in the FSR: (1) the ESRB/ECB scenario analysis published in July 2022 was used as a role model; and (2) NGFS scenarios provide downscaled information in individual jurisdictions, including economic variables provided by the NiGEM macroeconomic model. The latter does not yet apply to Iceland, but the Department of Economic Affairs is currently working on implementing the NiGEM model. Therefore, the CBI considers that in the meantime specific Icelandic results are needed to perform scenario analysis with economic variables. The central bank plans to explore available data, like the internal economic model (QMM), and perhaps buy rights to access additional data sources in order to implement NGFS scenarios fully.

**69. The Central Bank of Iceland plans to leverage its recent climate scenario analysis to develop solvency and liquidity stress testing further and to better define supervisory objectives.** Climate-related stress testing is not yet used to assess the adequacy of banks' solvency and liquidity buffers covering climate-related financial risks. Currently, the CBI's climate stress tests and standard stress tests that focus on the resilience of the banking sector are separate exercises, as for the EBA. Given that the EBA is considering taking ESG risks, including climate-related financial risks, in its next review of SREP guidelines, such risks have not been included in the Basel Pillar 2 requirement process in Iceland yet. In addition, the CBI intends by end-2023 to enforce a new law on

<sup>33</sup> FSR: [https://www.cb.is/library/Skraarsafn---EN/Financial Stability/2023/Financial Stability 2023 1.pdf](https://www.cb.is/library/Skraarsafn---EN/Financial%20Stability/2023/Financial%20Stability%202023%201.pdf).

the disclosure of sustainability and taxonomy for sustainable finance (planned to be adopted by the Parliament in mid-2023).

**70. Supervisory scenario analysis is too preliminary to identify data gaps, and size portfolio exposure.** The CBI needs to dedicate more work to bridge data gaps and enhance the identification, measurement, and assessment of banks' exposure to climate-related financial risks. The central bank should prioritize the work on bridging data gaps internally and in collaboration with banks, and public agencies that may also collect useful data (for instance, Statistics Iceland). The CBI has not yet taken such initiative.

### Prudential Regulatory and Supervisory Requirements for Banks

***Principle 13.** Supervisors should determine that banks' incorporation of material climate-related financial risks into their business strategies, corporate governance, and internal control frameworks is sound and comprehensive.*

**71. Supervisory assessment of banks' corporate governance frameworks on climate-related financial risks has started through the supervisory review and evaluation process and is awaiting more specific guidance and thorough analysis.** The CBI indicated that a first round of discussions including governance of ESG risks and climate-related issues took place during the 2022 SREP exercise of larger banks. Apart from that, the CBI has not yet reviewed nor thoroughly assessed whether banks have fully integrated climate-related risk drivers in their business strategies, corporate governance, and internal control frameworks. For instance, the roles and responsibilities of banks' boards of directors and senior management, as well as internal reporting on climate-related financial risks, remain to be assessed. The CBI has only some high-level insights that deserve a more granular assessment. Banks' 2022 Pillar 3 reports indicate that all larger banks have set up sustainability committees and included ESG risks in their governance frameworks and business strategies, but such high-level public information should be assessed more thoroughly.

***Principle 14.** Supervisors should determine that banks can adequately identify, monitor, and manage all material climate-related financial risks as part of their assessments of banks' risk appetite and risk management frameworks.*

**72. Supervisory assessment of banks' risk management strategies and objectives for climate-related financial risks has not yet been systematic.** The CBI has not yet reviewed the extent to which banks regularly assess the materiality of climate-related financial risks, supported by appropriate KRIs and, where applicable, risk mitigating measures. The CBI needs to assess to what extent banks have incorporated climate-related financial risks into their risk strategy, risk appetite (including risk exposure limits), and risk management frameworks. In their 2022 Pillar 3 reports, larger banks mentioned that they have defined policies and strategies on ESG risks, but with varying levels of details disclosed among banks. Adequacy and implementation of banks' risk management strategies and objectives have not yet been formally examined. Such supervisory assessment would be useful in the long term to ensure that banks have developed effective risk management strategies



on climate-related financial risks that are more specifically focused than ESG risks and have concretely embedded these strategies throughout their risk management processes. It is important that ESG is not just mentioned in banks' financial disclosure, whose purpose is mainly external communications.

**Principle 15.** *Supervisors should determine the extent to which banks regularly identify and assess the impact of climate-related risk drivers on their risk profile and ensure that material climate-related financial risks are adequately considered in their management of credit, market, liquidity, operational, and other types of risk. Supervisors should determine that, where appropriate, banks apply climate scenario analysis.*

**73. Supervisory assessment has not yet covered the inclusion of climate-related risk drivers in banks' risk assessment and risk management policies.** The CBI indicated that it has not structured a supervisory process nor engaged in supervisory action to ensure that banks (1) consider a range of mitigation options to manage and control material climate-related risks; and (2) consider climate-related financial risks assessed as material over relevant horizons within their internal capital and liquidity adequacy assessment processes (ICAAP and ILAAP). Even so, some specific requirements are in place, such as EBA guidelines for loan origination and monitoring (Article 208), which require that banks consider ESG factors when valuing immovable property collateral. However, this covers a limited scope of global risk management processes.

**74. The CBI plans to conduct supervisory assessments of banks' scenario analysis policies and processes after EBA guidelines on institutions' stress testing have been reviewed,** tentatively by 2023, and implemented within the Icelandic legislation. So far, the central bank has not determined whether banks effectively implement adapted scenario analysis to assess the resilience of their business models and strategies to a range of plausible climate-related outcomes. Due to time constraints, the CBI did not leverage banks' experience of scenario analysis to inform its first supervisory scenario analysis, published in March 2023. More thorough dialogue, guidance, and information sharing would be useful.

## B. Management of Climate-Related Financial Risks

### Corporate Governance

**Principle 1.** *Banks should develop and implement a sound process for understanding and assessing the potential impacts of climate-related risk drivers on their businesses and on the environments in which they operate. Banks should consider material climate-related financial risks that could materialize over various time horizons and incorporate these risks into their overall business strategies and risk management frameworks.*

**75. The Central Bank of Iceland has implemented EU regulations and EBA guidelines on corporate governance, which include requirements for ESG.** The CBI refers to EBA guidelines EBA/GL/2021/05 on internal governance requiring banks' boards of directors to take into account ESG risks (including material physical and transition risk drivers of climate-related financial risks) when developing and implementing their business strategies. Regarding the consideration of

climate-related financial risks in banks' compensation policies, the EBA published a guideline stating that remuneration policies should be in line with ESG strategies. Existing legal requirements state that banks' remuneration policies should be in line with their overall strategies, objectives, values, risk appetites, and long-term interests. When reviewing and discussing remuneration policies with larger banks during the 2022 SREP, the CBI noted that climate-related factors should be more visible in remuneration policies and frameworks, but no formal supervisory action was decided.

**76. Icelandic banks have disclosed at some point information on their corporate governance of ESG, including climate-related financial risks.** Financial disclosure of 2022 annual accounts by the three larger banks<sup>34</sup> reveals that Icelandic banks are aware of requirements for ESG-related objectives, risk management, and disclosure, though banks seem to make uneven progress. Even if banks' effective commitment to consider climate-related financial risks is specifically emphasized in their financial disclosure, there may be room for further enhancement. Banks' ESG frameworks have been evaluated by Reitun, a national rating agency specialized in ESG rating, and they received good ratings<sup>35</sup>. This is a commendable initiative that can support work on improving green strategies and developing sustainable finance. Yet not all evaluations by Reitun took place after the latest international standards and the release of EU/EBA guidelines on ESG and climate-related financial risks. Moreover, Reitun's methodology refers mostly to more global guidance on ESG issued by the United Nations, and Nasdaq, among other sources, which are less focused than BCBS principles on climate-related financial risks applicable to banks. In addition, the CBI indicated that Reitun is not a regulated external rating agency, and that the relevancy and adequacy of Reitun's assessment methodology has not been evaluated from a risk-based and prudential viewpoint of banking regulation and supervision.

**77. Supervisory assessment of the impact of climate-related financial risks on Icelandic banks' business models is a work in progress.** The CBI during the 2022 SREP assessed the three larger banks' business plans, which were designed before the finalization of the 2021 EBA guidelines on governance and the 2022 BCBS principles on climate-related financial risks. Consequently, one bank was advised to start integrating ESG more effectively into its strategy setting and business planning; additional action is needed. The CBI will further emphasize ESG risks globally in the supervisory dialogue with banks and plans to start deeper discussions in 2023. So far, it is premature to evaluate how physical and transition risks would impact the resilience of banks' business models. The CBI mentioned that several banks have included environmental risk factors in their stress test scenarios for ICAAP/ILAAP, which build on their business plans, and in their recovery plan scenario analysis. However, such practices are neither systematic nor thorough. Some qualitative risk assessment is being put forward in banks' business plans and is discussed during the SREP.

<sup>34</sup> See Appendix IV for references to the financial disclosure of Arion Banki, Islandsbanki, and Landsbankinn.

<sup>35</sup> Reitun's rating reports: Arion Banki (2022), [Einblöðungur Arion 2022 enska loka.pdf \(arionbanki.is\)](#); Landbankinn (2020), [landsbankinn\\_esg-reitun.pdf](#).

**Principle 2.** *The board and senior management should clearly assign climate-related responsibilities to members and/or committees and exercise effective oversight of climate-related financial risks. Further, the board and senior management should identify responsibilities for climate-related risk management throughout the organizational structure.*

**78. Banks' boards of directors are increasingly considering climate-related financial risks within their scope of duties, as the supervisory review process has established.** The CBI applies EBA guidelines EBA/GL/2021/06 on assessment of suitability of members of banks' management bodies and key function holders, requiring that banks' boards of directors and senior management effectively oversee and manage all risk domains, including ESG. Annual self-assessments of banks' boards made during the 2022 SREP reflected increased focus on ESG. Regarding climate-related financial risks specifically, more concrete illustration of the involvement of banks' boards and senior management would be useful in order to demonstrate that banks' ESG and sustainability policies are also effectively focused on (1) climate-related financial risks; and (2) risk management of these risks.

**79. Financial disclosure of larger banks in 2022 clearly brings out a range of commendable initiatives to proactively implement sustainable finance strategies.** The following list is not comprehensive, but illustrates concrete actions undertaken by banks (see Appendix IV for reference materials): setting up a sustainability committee; adopting an environmental and climate policy; developing green finance products; deciding sustainability objectives for 2023 to reach GHG and net-zero strategic objectives; reporting on financed GHG emissions; disclosing the bank's GHG emissions' footprint and the ratio of carbon-related assets in the total loan book using the TCFD definition; participating in domestic and international cooperation initiatives; and carrying out an ESG risk assessment for corporate customers.

**80. Banks are developing their resources and capacities to upgrade their risk management frameworks on climate-related financial risks.** Larger banks have adopted a sustainability policy approved by the board and set up a sustainability committee. They have also created dedicated units and hired staff with expertise in ESG and sustainability. The adequacy of banks' human resources and expertise has not been assessed by the CBI, which is planning to do so during the 2023 SREP on larger banks. Yet the FSAP team met with banks' representatives during the main mission, and discussions revealed that banks clearly take climate-related financial risks seriously, which may be seen as a strategic opportunity for the CBI to intensify the supervisory dialogue in order to further develop the capacities of both the banking sector and the supervisory authority.

**Principle 3.** *Banks should adopt appropriate policies, procedures, and controls that are implemented across the entire organization to ensure effective management of climate-related financial risks.*

**81. Effective adoption and implementation of appropriate policies and procedures on management of climate-related financial risks through operational processes needs to be assessed.** No information is available that would illustrate how larger banks have appropriately incorporated climate-related financial risks into their concrete operational processes, for instance,

credit risk management. The CBI has not yet performed in-depth assessment through offsite supervision or on-site inspections.

## Internal Control Framework

**Principle 4.** *Banks should incorporate climate-related financial risks into their internal control frameworks across the three lines of defense to ensure sound, comprehensive, and effective identification, measurement, and mitigation of material climate-related financial risks.*

**82. There is not much evidence, from the supervisory side, that banks have effectively included climate-related financial risks in their internal control frameworks, including internal audit.** Applicable EBA guidelines EBA/GL/2021/05 on internal governance states that banks' internal control frameworks should cover a global scope and all risk domains, implicitly including climate-related financial risks. The CBI discussed this with banks' managers of internal audit and risk management functions during the last SREP campaign, yet the effective coverage of climate-related financial risks by the so-called "three lines of defense" of banks' internal control frameworks remains to be assessed. The CBI would benefit from concrete and periodic inputs of banks' risk management and internal audit functions, for instance, risk dashboards and audit reports. This would help the central bank better understand banks' effective implementation of adequate and independent internal control of climate-related financial risks.

## Capital and Liquidity Adequacy

**Principle 5.** *Banks should identify and quantify climate-related financial risks and incorporate those assessed as material over relevant time horizons into their internal capital and liquidity adequacy assessment processes, including their stress testing programs where appropriate.*

**83. The impact assessment process of climate-related financial risks on banks' solvency has not yet matured.** The CBI indicated that banks are not yet explicitly required to include climate-related financial risks in their ICAAP, in view of assessing the impact of such risks on their capital adequacy. Yet the CBI mentioned that banks have started to incorporate solvency impact assessment of climate-related financial risks into their internal stress testing and ICAAP processes. Current bank practice is to include climate-related financial risks in ICAAP reports without trying to quantify their impact on capital. Therefore, the materiality of potential needs of additional capital resulting from climate-related financial risks has not been assessed over near- to long-term horizons yet.

**84. The impact assessment of climate-related financial risks on banks' liquidity has not been developed so far.** The CBI also indicated that banks are not yet explicitly required to include climate-related financial risks in their ILAAP, in view of assessing the impact of such risks on their liquidity adequacy and funding. Given that supervisory processes have not yet been adapted in that regard, the CBI cannot assess whether climate-related financial risks could cause net cash outflows or depletion of liquidity buffers, assuming either business-as-usual conditions or external shocks (considering severe yet plausible stress scenarios).

**85. Banks' risk analysis and stress testing capabilities regarding climate-related financial risks are being developed.** The EBA Report EBA/REP/2021/18 on management and supervision of ESG risks has not been legally enforced in Icelandic legislation yet. Therefore, regulation and supervisory processes have not yet been structured in a way that banks are effectively advised to (1) build risk analysis capabilities by identifying relevant climate-related risk drivers that may materially impair their financial condition; (2) develop KRIs and metrics to quantify exposure to these risks; and (3) assess the links, or interconnectedness, between climate-related financial risks and traditional financial risk domains, such as credit risks and liquidity and funding risks. The CBI mentioned that, nevertheless, Icelandic banks have started to incorporate climate-related financial risks into climate change-related scenarios used for internal stress testing and whose results are considered in ICAAP reports. For instance, one bank is considering a scenario focusing on the fishing industry, whose sector may be significantly impacted by both climate-related physical and transition risks, given that credit exposure on fisheries are significant in that bank.

### Risk Management Process

***Principle 6.** Banks should identify, monitor, and manage all climate-related financial risks that could materially impair their financial condition, including their capital resources and liquidity positions. Banks should ensure that their risk appetite and risk management frameworks consider all material climate-related financial risks to which they are exposed and establish a reliable approach to identifying, measuring, monitoring, and managing those risks.*

**86. Banks' risk management frameworks and processes relating to climate-related financial risks have not yet undergone supervisory assessment.** The CBI mentioned that specific legal requirements on risk management of climate-related financial risks are not yet in place, but the EBA is developing ESG risk management guidelines, which will address this. Therefore, banks are not yet required to regularly carry out a comprehensive assessment of climate-related financial risks and set clear definitions and thresholds for materiality, nor to develop appropriate KRIs for effective management of material climate-related financial risks that align with their regular monitoring and escalation arrangements. The CBI has not started to assess the adequacy of banks' risk management frameworks and processes relating to climate-related financial risks.

**87. Available information on banks' existing risk management framework and processes specific to climate-related financial risks is not detailed.** According to the CBI, banks have performed limited work in view of structuring risk management of climate-related financial risks and considering mitigation measures (such as internal limits) accordingly. Further supervisory assessment work by the CBI should bring useful information for supervisory purposes, in addition to general information disclosed in banks' Pillar 3 reports.

## Management Monitoring and Reporting

**Principle 7.** *Risk data aggregation capabilities and internal risk reporting practices should account for climate-related financial risks. Banks should seek to ensure that their internal reporting systems are capable of monitoring material climate-related financial risks and producing timely information to ensure effective board and senior management decision-making.*

**88. Banks' data collection and aggregation processes on climate-related financial risks for internal risk management have not been assessed.** The CBI indicated that no specific requirements have been issued focusing on banks' data on climate-related financial risks, in view of setting up an adapted data production and management infrastructure, including data processing and collecting relevant data from counterparties. EBA guidelines are expected to address this issue after they have been enforced, but in the meantime, regular supervisory processes for supervisory data reporting are not in place.

**89. Supervisory data collection and analysis of climate-related financial risks within the banking sector are in a preliminary stage that may hinder the development of prudential oversight and supervision if no action is taken.** This major precondition for sound supervision and risk management is not satisfied yet. Both the CBI and banks (as well as pension funds, and other stakeholders met during the mission) stated that lack of data is one of the largest hindrances in effective management of climate-related financial risks. At the time of the Iceland main FSAP mission, there was no clear assurance that banks had adequate data aggregation capabilities, nor that they could collect accurate and reliable data, including relevant data from counterparties. Much work is needed from regulators and banks to reach the expected state of the art, that is, a full-fledged data management framework that should enable reliable and relevant data-reporting to banks' boards and senior management, as well as to supervisors. Quantitative and qualitative metrics or indicators would assess, monitor, and report climate-related financial risks.

## Comprehensive Management of Credit Risk

**Principle 8.** *Banks should understand the impact of climate-related risk drivers on their credit risk profiles and ensure that credit risk management systems and processes consider material climate-related financial risks.*

**90. As part of ESG, climate-related credit risks are covered by EBA guidelines on loan origination and monitoring.** EBA guidelines EBA/GL/2020/06 consider ESG factors in various provisions relating to credit risk management processes, including credit risk policies, assessment of borrowers' creditworthiness, credit decisions, and valuation of property collateral. Provisions specific to climate-related financial risks are less explicit than for ESG in general. Yet the CBI is not planning to give more specific clarifications to banks regarding the implementation of this EBA guideline in Iceland.

**91. Banks' adjustment of their credit risk management processes considering climate-related drivers and risks have not yet been assessed.** No information was available from the CBI

on climate-related credit risk management within the banking sector, including banks' mitigation techniques aimed at reducing their exposure to climate-related credit risk. The CBI has not enacted any thorough offsite supervision and onsite inspection on that front.

**92. Therefore, Icelandic banks' climate-related credit risk exposure cannot be clearly measured yet.** Given the lack of relevant data, and pending implementation of regulation and supervision of climate-related credit risk, it is premature to identify, measure, and assess banks' exposure to credit risk resulting from climate-related financial risks. And no analysis is available that may help determine whether Icelandic banks' exposure to potential loan-losses linked to climate change is material or not.

### Comprehensive Management of Market, Liquidity, Operational, and Other Risks

***Principle 9.** Banks should understand the impact of climate-related risk drivers on their market risk positions and ensure that market risk management systems and processes consider material climate-related financial risks.*

**93. Specific supervisory requirements or guidance on climate-related market risk are not yet applicable.** The CBI has not set any specific requirements regarding climate-related market risk management, but the EBA is developing ESG risk management guidelines, which are expected to address this issue. Therefore, banks are not explicitly required to (1) identify and understand how climate-related risk drivers could affect the value of the financial instruments in their portfolio; (2) evaluate the potential risk of losses on and increased volatility of their portfolio; and (3) establish effective processes to control or mitigate the associated impacts.

**94. Banks' adjustment of their market risk management processes considering climate-related drivers and risks have not yet been assessed.** Given the lack of information and pending implementation of regulation and supervision of climate-related market risk, it is premature to identify, measure, and assess banks' exposure to market risk resulting from climate-related financial risks. Even so, they might not be material, considering that global exposure of Icelandic banks to market risk is limited. To the CBI's knowledge, banks have not yet considered how the pricing and availability of hedges can change, given different climate and transition pathways, but the simplicity of banks' hedging strategies might be a mitigating factor at some point.

***Principle 10.** Banks should understand the impact of climate-related risk drivers on their liquidity risk profiles and ensure that liquidity risk management systems and processes consider material climate-related financial risks.*

**95. Specific supervisory requirements or guidance on climate-related liquidity and funding risks are not yet applicable.** The CBI has not set any specific requirements regarding climate-related liquidity risk management, but the EBA is developing ESG risk management guidelines, which are expected to address this issue. Therefore, banks are not explicitly required to assess the impact of climate-related financial risks on net cash outflows (for instance, increased drawdowns of credit lines,

accelerated deposit withdrawals or reallocation), nor the value of assets comprising their liquidity buffers (high-quality liquid assets—HQLA).

**96. Banks’ adjustment of their liquidity risk and funding risk management processes considering climate-related drivers and risks have not yet been assessed.** Given the lack of information and pending implementation of regulation and supervision of climate-related liquidity risk, it is premature to identify, measure, and assess banks’ exposure to (short-term) liquidity risk and to (longer-term) funding risk resulting from climate-related financial risks. The issuance of green bonds by banks is at an early stage. Besides, the pricing effect of the development of green finance products on profitability may be an attention point to monitor, as well as the overall impact of climate-related financial risks on banks’ profitability drivers and structure.

**Principle 11.** *Banks should understand the impact of climate-related risk drivers on their operational risk and ensure that risk management systems and processes consider material climate-related risks. Banks should also understand the impact of climate-related risk drivers on other risks and put in place adequate measures to account for these risks, where material. This includes climate-related risk drivers that might lead to increasing strategic, reputational, and regulatory compliance risk, as well as liability costs associated with climate-sensitive investments and businesses.*

**97. Specific supervisory requirements or guidance on climate-related operational risk are not yet applicable.** Icelandic banks are subject to existing prudential requirements on operational risk management, which are stated in Act No. 161/2002, notably on business continuity planning. In that sense, climate-risk drivers should already be identified and included in business continuity plans, as physical risks may directly or indirectly impact business continuity. Yet no specific requirement has been issued on consideration to be given to climate-related financial risks within the operational risk management framework and processes. During the FSAP mission, no information was available on other aspects of risk management pertaining to operational risk, especially compliance risk, legal risk, and liability costs that may result from climate-related financial risks, not to mention reputational risk and strategic risk, which are not part of operational risk.

**98. Banks have developed business continuity plans that consider threats resulting from climate change-related events, yet the impact of climate-related risk drivers on banks’ operations remains to be clarified.** Icelandic banks as well as the CBI pay serious attention to business continuity planning. In addition, the financial sector is used to address issues resulting from natural hazards, which are inherent to Iceland, and the Natural Catastrophe Fund plays a key mitigating role. Though natural hazards do not always result from climate change, incorporating climate-related physical risks into regular operational risk management should not be a major issue for Icelandic banks. Banking supervision should further assess whether climate-related financial risks may have any additional specific potential impact in that regard.



## Scenario Analysis

**Principle 12.** *Where appropriate, banks should make use of scenario analysis to assess the resilience of their business models and strategies to a range of plausible climate-related pathways and determine the impact of climate-related risk drivers on their overall risk profile. These analyses should consider physical and transition risks as drivers of credit, market, operational, and liquidity risks over a range of relevant time horizons.*

**99. Banks have not yet been required to develop climate scenario analysis that reflects their risk assessment and risk objectives, but they are working on it.** According to the CBI, internal scenario analysis on climate is not yet a requirement, but banks have been taking their first steps, which supervisors plan to consider in the next round of SREP for larger banks. The CBI is in the process of collecting more information on the climate modeling processes of banks, whose outcome was not available at the time of the mission. The CBI also plans to conduct a bottom-up climate scenario analysis in cooperation with the banks in the near future. This would be a welcome initiative, given that the CBI did not rely much on banks' input when performing its first scenario analysis, which was mostly based on Credit Registry data. Thus, it is too early to get any supervisory assessment of the accuracy, quality, and results of banks' climate scenario analysis. Developments under Principle 12 in the 2022 BCBS principles offer useful guidance on the expected objectives of such supervisory assessment of banks' scenario analysis process, which should notably reflect relevant climate-related financial risks, employ a range of time horizons, and be subject to challenge and regular review.

## C. Recommendations

**100. Enhance the CBI's internal organizational framework for oversight and supervision of climate-related financial risks.** Roles and responsibilities among departments involved in oversight and supervision of climate-related risks should be clarified internally in a strategic roadmap to ensure adequate coverage of this transversal topic, set relevant supervisory objectives and action plans, and enable efficient use of limited human resources. Three departments should be the main contributors: Financial Stability, Prudential Supervision, and Conduct Supervision, with support from other departments as relevant. Practical options for more structured internal organization are left to the CBI. The definition of a matrix of roles and responsibilities, the setup of an internal steering committee including management representatives, and the designation of a climate expert as the focal point of contact internally may be possible ideas for incorporating climate-related financial risks into the existing supervisory setup within the CBI.

**101. Develop supervisory assessment methodology, tools, and processes, considering existing and future EBA requirements for climate-related financial risks within the banking sector.** Along with the ongoing clarification of the EU/EBA regulatory framework on ESG, focusing on climate-related financial risks, the CBI should structure supervisory processes, tailor the supervisory assessment methodology to Iceland, develop tools and databases accordingly, and draft internal procedures and/or guidance relating to oversight and supervision of climate-related financial risks.

That would help in mitigating the “key-person risk” resulting from the current concentration of expertise and knowledge within the CBI.

**102. Develop and refine adapted supervisory stress testing and scenario analysis on climate-related financial risks within the banking sector.** Building on the outcome of the scenario analysis disclosed in March 2023, the CBI should progressively enhance supervisory stress testing, using scenarios issued by the NGFS and the EBA, tailoring them, or jointly developing national scenarios, that incorporate Iceland’s specific climate risk drivers. Reaching the expected outcome may require several years of work, which should be planned accordingly with interim milestones to achieve.

**103. Bridge data gaps on climate-related financial risks within the banking sector.** The CBI should determine the set of required banking data useful to scenario analysis and microprudential supervision, and collect such data, accordingly, based on regulatory reporting requirements on climate-related financial risks. The CBI should prioritize setting relevant data requirements on climate-related financial risks, including KPIs/KRIs, exposures, and any other data useful to the CBI for microprudential supervision and climate stress testing. This is a major precondition for achieving effective supervision.

**104. Engage the banking sector in a more proactive and thorough supervisory dialogue to strengthen respective capacities of supervisors and banks to assess and manage climate-related financial risks.** The CBI should set up an institutional communication policy with the banking sector, as well as an adapted program of supervisory meetings with banks at various levels of responsibilities, to enhance supervisors’ information on climate-related financial risks and to support banks’ ownership and implementation of applicable requirements. The CBI should not hesitate to engage banks in more interaction that would help in finetuning reporting and regulatory requirements and supporting mutual progress on management and supervision of climate-related financial risks.

**105. Disclose supervisory expectations to banks and provide guidance on implementation, corporate governance, and risk management of climate-related financial risks.** In addition to the package of EU/EBA regulations, targeted and proportionate national guidance would be useful.

**106. Assess the impact of climate-related financial risks on banks’ business models and profitability drivers.** The CBI should build on expected developments of identification, measurement, and assessment of climate-related financial risks in the coming years to be able to make an informed global assessment of the overall impact of such risks on banks’ business models, as well as banks’ profitability drivers and structure. This is a medium- to long-term objective that requires prior implementation of reliable and relevant data collection, and thorough supervisory assessment of climate-related financial risks.

**107. Assess the adequacy of banks’ corporate governance, internal organization and resources, capacity, and internal control of climate-related financial risks.** The CBI should get evidence of appropriate and effective frameworks in place, as well as adequate staffing and expertise,

at least within larger banks, in view of ordering preventive or corrective action, if needed. The CBI would benefit from inputs provided by increasingly capable bank experts, managers, and heads of independent internal control functions on climate-related financial risks throughout regular supervisory processes.

**108. Assess the adequacy of banks' risk management frameworks and processes for climate-related financial risks.** The CBI should closely monitor the progressive construction and capacity development of banks' risk management functions and processes regarding climate-related financial risks, to ensure that risk management becomes adequate and effective.

**109. Assess banks' data production and reporting processes for climate-related financial risks and enhance supervisory data collection and analysis concomitantly.** Once data requirements on climate-related financial risks have been clarified, the CBI should assess the effective implementation within banks of reliable frameworks for related climate data production, quality control, and regulatory reporting.

**110. Assess the impact of climate-related risk drivers of credit risk, as well as the adequacy of adjusted credit risk management processes and mitigation techniques, to evaluate banks' exposure to climate-related credit risk.** Building on enhanced banks' data reporting and ICAAP reports, the CBI should challenge banks' self-assessment of their credit risk exposure resulting from climate-related financial risks and complete a reliable supervisory assessment.

**111. Assess the impact of climate-related risk drivers of market risk, as well as liquidity and funding risks, to evaluate banks' exposure to climate-related risks in these domains.** The CBI should prioritize the assessment of banks' exposures to liquidity risk resulting from climate-related financial risks, leveraging enhanced banks' data reporting and ILAAP reports. The impact on banks' long-term funding strategy would also deserve supervisory attention. The CBI should clarify the eventual materiality of climate-related market risk.

**112. Ensure that climate-related risk drivers have been adequately incorporated into relevant operational risk management processes, beyond business continuity planning, that may be impacted.** In addition to the existing supervisory assessment of operational risk, the CBI should ensure that climate-related physical and transition risks are properly considered in all components of operational risk that may be impacted, in addition to business continuity planning. The CBI should also pay further attention to banks' potential exposure to legal and compliance risks, and liability costs, which might result from climate change issues.

**113. Assess the adequacy of banks' climate scenario analysis and develop a supervisory dialogue with banks on related results to enhance the impact assessment on capital adequacy and liquidity.** The CBI should implement planned development of supervisory stress testing and scenario analysis. The central bank should continuously improve and finetune relevant methodologies used to consider climate-related financial risks in order to improve the assessment of the adequacy of banks' solvency and liquidity buffers. In the long run, the CBI should get an

informed opinion on whether banks' net exposure to climate-related financial risks would specifically require additional Pillar 2 capital requirements and/or additional liquidity buffers.

## Appendix I. Icelandic Legislation and Action Plans on Climate Change that May Be Relevant to the Banking Sector<sup>1</sup>

The following table includes a tentative list of reference background documentation from relevant sources publicly disclosed in English (unless otherwise stated for one document) relating to the country's global response to climate change, which may be directly or indirectly relevant to the financial sector and/or useful to the FSAP evaluation on climate-related financial risks.

Documentation has been identified and collected by the IMF expert. Without any official list, important reference documents might be missing from the table. Besides, no documentation has been identified with regard to the financial sector (for example, risk assessment, scenario analysis, "green finance" objectives, or aggregated financial disclosure).

Icelandic Legislation and Action Plans	Purpose
<b>National legislation on climate change</b>	
Unknown	National laws may be adopted in 2023, for instance, on the transposition of the EU taxonomy directive (to be confirmed).
<b>Risk and impact assessments of climate change in Iceland, and climate action plans at country level</b>	
Iceland's 2020 Climate Action Plan	Update of the initial country's roadmap to address climate change (Iceland's Climate Action Plan 2018–30). <a href="https://www.government.is/201004-Umhverfisraduneytid-Adgerdaaetlun-EN-V2.pdf">201004 Umhverfisraduneytid Adgerdaaetlun EN V2.pdf (government.is)</a>
In View of the Climate Crisis—Iceland's Strategy on Adaptation to Climate Change (September 2021)	Report disclosed by the MoEEC. <a href="https://www.government.is/lisalib/getfile.aspx?itemid=694bf462-35c4-11ed-9bb0-005056bc4727">https://www.government.is/lisalib/getfile.aspx?itemid=694bf462-35c4-11ed-9bb0-005056bc4727</a>
Climate Action Plan—Actions by the Icelandic government to promote a reduction in GHG emission until 2030 (June 2020)	Interim report disclosed by the Icelandic government (in Icelandic only). <a href="https://www.stjornarradid.is/Adgerdaaetlun-1-loftslagsmalum-Adgeroir-islenskra-stjornvalda-til-a-d-stuola-a-d-samdrætti-1-losun-gróðurhúsalofttegunda-til-2030">Aðgerðaaetlun í loftslagsmálum - Aðgerðir íslenskra stjórnvalda til að stuðla að samdrætti í losun gróðurhúsalofttegunda til 2030 (stjornarradid.is)</a>
On the Path to Climate Neutrality—Iceland's Long-Term Low Emission Development Strategy (October 2021)	Report issued by the Icelandic government, Ministry for the Environment and Natural Resources (now MoEEC). <a href="https://unfccc.int/sites/default/files/resource/Iceland_LTS1_2021.pdf">https://unfccc.int/sites/default/files/resource/Iceland_LTS1_2021.pdf</a>
A Sustainable Energy Future—An Energy Policy to the Year 2050 (September 2020)	Report issued by the Icelandic government, Ministry of Industry and Innovation. <a href="https://www.stjornarradid.is/lisalib/getfile.aspx?itemid=e36477fd-3bc1-11eb-8129-005056bc8c60">https://www.stjornarradid.is/lisalib/getfile.aspx?itemid=e36477fd-3bc1-11eb-8129-005056bc8c60</a>

<sup>1</sup> This list is not exhaustive and may not include other relevant materials.

Icelandic Legislation and Action Plans	Purpose
Iceland's National Plan issued in accordance with declaration related to the decision of EEA joint committee No 269/2019 of 25 October 2019	Report issued by the Icelandic government, Ministry for the Environment and Natural Resources. <a href="https://www.stjornarradid.is/library/02-Rit--skyrslur-og-skrar/Iceland%20National%20Plan%202020.pdf">https://www.stjornarradid.is/library/02-Rit--skyrslur-og-skrar/Iceland%20National%20Plan%202020.pdf</a>
Iceland's Implementation of the 2030 Agenda for Sustainable Development—Voluntary National Review (June 2019)	Report issued by the Prime Minister's Office. <a href="https://www.un.org/23408VNR_Iceland_2019_web_final.pdf">23408VNR_Iceland_2019_web_final.pdf (un.org)</a>
Iceland's Sovereign Sustainable Financing Framework (September 2021)	Report issued by the MoFEA. <a href="https://www.stjornarradid.is/Iceland's%20Sovereign%20Sustainable%20Financing%20Framework">Iceland's Sovereign Sustainable Financing Framework (stjornarradid.is)</a>
Sustainability Report of the Central Bank of Iceland (2021)	<a href="https://www.cb.is/library/Skraarsafn---EN/Sustainability_report_2021.pdf">https://www.cb.is/library/Skraarsafn---EN/Sustainability_report_2021.pdf</a>
<b>Risk and impact assessments of climate change on the Icelandic financial sector</b>	
Unknown	
<b>Other public sources of information on climate-related topics (in English)</b>	
Ministry of the Environment, Energy and Climate	<a href="https://www.government.is/ministries/ministry-of-the-environment-energy-and-climate/">https://www.government.is/ministries/ministry-of-the-environment-energy-and-climate/</a>
Ministry of Finance and Economic Affairs	<a href="https://www.government.is/ministries/ministry-of-finance-and-economic-affairs/">https://www.government.is/ministries/ministry-of-finance-and-economic-affairs/</a>
Icelandic Climate Council	<a href="https://www.loftslagsrad.is/english/">https://www.loftslagsrad.is/english/</a>
The Environment Agency of Iceland	<a href="https://ust.is/english/">https://ust.is/english/</a>
The Icelandic Meteorological Office	<a href="https://en.vedur.is/">https://en.vedur.is/</a>
Natural Catastrophe Insurance of Iceland	<a href="https://www.nti.is/en/">https://www.nti.is/en/</a>
National Energy Authority	<a href="https://nea.is/">https://nea.is/</a>
Source: IMF staff.	

## Appendix II. EU and EBA Norms Applicable to Iceland on Climate-Related Financial Risks

The following table presents a tentative list (with related references to public sources of information) of norms issued by European Institutions that may include provisions on climate-related financial risks. This list includes (1) directives and regulations of the European Union (EU), including CRD/CRR; and (2) regulatory technical standards (RTS) and guidelines (GL) issued by the European Banking Authority (EBA). The norms have been identified by the Central Bank of Iceland (CBI) as applicable in Iceland as part of existing legislation enforceable at the national level.

European norms applicable in Iceland pertaining to climate-related financial risks	Purpose/Comments
<b>EU Directives and Regulations</b>	
Regulation (EU) 1093/2010 establishing a European Supervisory Authority (updated December 18, 2019)	Amended EBA founding regulation. Article 29(1).f requires the EBA to monitor ESG risk in the European banking system, which includes Iceland. Articles 23 and 32 of the EBA Founding Regulation empowers the EBA to develop common methodology to perform regular climate change stress tests.  <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02010R1093-20210626&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02010R1093-20210626&amp;from=EN</a>
Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions (updated February 16, 2021)—Capital Requirements Directive (CRD)	Amended CRD. Planned changes, called CRD6, will enhance the focus on ESG risks in the prudential framework. The EBA has already started to work on implementing the directive.  <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02013L0036-20220101&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02013L0036-20220101&amp;from=EN</a>
Regulation (EU) 575/2013 on prudential requirements for credit institutions (June 26, 2013, updated June 24, 2021)—Capital Requirements Regulation (CRR)	Amended CRR, which determines the Pillar 1 capital requirements. Article 501c of the CRR addresses the prudential treatment of exposures subject to ESG risks.  <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02013R0575-20230101&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02013R0575-20230101&amp;from=EN</a>
Directive 2014/95/EU amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups—Non-Financial Reporting Directive (NFRD)	Initial NFRD in force. Now amended by CSRD (see below) to incorporate sustainability within disclosure.  <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0095&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0095&amp;from=EN</a>

European norms applicable in Iceland pertaining to climate-related financial risks	Purpose/Comments
Regulation (EU) 2019/2088 on sustainability disclosure in the financial sector (November 27, 2019)—Sustainable Finance Disclosure Regulation (SFDR)	Amended SFDR, which lays down disclosure requirements for manufacturers of financial products and financial advisers (applicable in Iceland as of January 1, 2023). <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02019R2088-20200712&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02019R2088-20200712&amp;from=EN</a>
Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088—Taxonomy Regulation (TR)	On taxonomy for sustainable investment with information on to what extent activities qualify as environmentally sustainable. <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0852&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0852&amp;from=EN</a>
Directive (EU) 2022/2464 amending Regulation (EU) No. 537/2014, Directive 2004/109/EC, Directive 2006/43/EC, and Directive 2013/34/EU, as regards corporate sustainability reporting (December 14, 2022)—Corporate Sustainability Reporting Directive (CSRD)	Initial CSRD in force, which specifies what ESG information effected corporations are to publish (applicable in Iceland as of January 1, 2023). <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022L2464&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022L2464&amp;from=EN</a>
Regulation (EU) 2022/2453 of 30 November 2022 amending the implementing technical standards laid down in Implementing Regulation (EU) 2021/637 as regards the disclosure of environmental, social and governance risks	Specifies ESG disclosure requirements based on CRR, article 449a. <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R2453&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R2453&amp;from=EN</a>
<b>EBA Guidelines</b>	
EBA/GL/2020/06 (May 29, 2020)—Final report—Guidelines on loan origination and monitoring	Guidelines on loan credit risk management including reference to ESG risk. <a href="#">EBA GL 2020 06 Final Report on GL on loan origination and monitoring.pdf (europa.eu)</a>
EBA/GL/2021/05 (July 2, 2021)—Final report—Guidelines on internal governance under Directive 2013/36/UE	Guidelines on internal governance including reference to ESG risk. <a href="#">Final report on Guidelines on internal governance under CRD.pdf (europa.eu)</a>
EBA/GL/2022/03 (March 18, 2022)—Final report—Guidelines on common procedures for the supervisory review and evaluation process (SREP) and supervisory stress testing under Directive 2013/36/EU	Guidelines on the Supervisory Review and Evaluation Process including requirements on ESG risks, based on Art. 100(4) of the draft CRD. <a href="#">BoS 2018 xx Revised SREP GL including amendment for reference.docx (europa.eu)</a>
EBA/GL/2021/04 (July 2, 2021)—Final report—Guidelines on sound remuneration policies under Directive 2013/36/EU	Guidelines on the remuneration policies of banks including reference to ESG risk. <a href="#">Draft Final report on GL on remuneration policies under CRD.pdf (europa.eu)</a>



<b>European norms applicable in Iceland pertaining to climate-related financial risks</b>	<b>Purpose/Comments</b>
EBA/GL/2018/04 (July 19, 2018)—Final report—Guidelines on institutions' stress testing	EBA will update GL on stress testing to include ESG risks (CRD, Article 87a(5)(d).  <a href="#">EBA BS 2017 XXX GL on institution's stress testing.docx (europa.eu)</a>
EBA/REP/2021/18 (June 23, 2021)—EBA Report—Management and supervision of ESG risk for credit institutions and investment firms	Report (not enforceable) developing supervisory expectations for the management of ESG risk within banks, based on Article 87a of the draft CRD.  <a href="#">2020-10-15 BoS - ESG report MASTER FILEcl.docx (europa.eu)</a>
EBA/ITS/2022/01 (January 24, 2022)—Final report—Final draft implementing technical standards on prudential disclosures on ESG risks in accordance with Article 449a CRR	Implementing Technical Standards (ITS) on prudential disclosures on ESG risks information that large institutions with securities traded on a regulated market of any Member State must publicly disclose on ESG risks (CRR, article 449a).  <a href="#">EBA draft ITS on Pillar 3 disclosures on ESG risks.pdf (europa.eu)</a>
EBA/DP/2022/02 (May 2, 2022)—Discussion Paper—The Role of Environmental Risks in the Prudential Framework	This EBA discussion paper (not enforceable) covers environmental risk, whose scope is broader than for climate-related financial risks.  <a href="#">On the role of environmental risk in the prudential framework (europa.eu)</a>
EBA/REP/2022/30 (December 2022)—Report—The EBA Roadmap for Sustainable Finance	Informative document on EBA's regulatory strategy.  <a href="#">EBA Roadmap on Sustainable Finance.pdf (europa.eu)</a>
EBA/REP/2021/11 (May 21, 2021)—Report—Mapping climate risk: Main findings from the EU-wide pilot exercise	Informative report on EBA's work on data classification approaches and green taxonomy classification.  <a href="#">Mapping climate risk: Main findings from the EU-wide pilot exercise (europa.eu)</a>
<b>Icelandic laws and prudential regulations</b>	
Act No. 161/2002 on Financial Undertakings (December 20, 2022, updated July 14, 2022)	Legal provisions on banking supervision and prudential requirements applicable to banks ("banking law").  Iceland has not issued any specific legislation nor application regulation on management and supervision of climate-related financial risks.  <a href="#">Act No. 161 2002 on Financial Undertakings.pdf (cb.is)</a>
Sources: IMF staff; Central Bank of Iceland (for identification of applicable European regulations).	

## Appendix III. EU Disclosure Requirements on ESG



Source: EBA.

## Appendix IV. 2022 Financial Disclosure on Sustainable Finance by Larger Icelandic Banks

The following lists document the strategies and policies of Icelandic domestic systemically important banks pertaining to ESG risks, including climate-related financial risks. The accuracy of banks' information and data on governance, risk management, exposure, and mitigation of such risks was not assessed during the FSAP mission.

### Arion Banki

- Investor relations: <https://www2.arionbanki.is/?Pageld=5ef60c27-75c5-11e7-9bb3-d8d385b77fc4&>
- Pillar 3 report (2022): <https://www2.arionbanki.is/library/skrar/English/About-the-Bank/Investor-Relations/Financial-information/Pillar-3-Risk-Disclosures---ahaettuskysrsla/2022/Pillar%20%20Risk%20Disclosures%202022.pdf>
- Principles for Responsible Banking—Self-Assessment (2022): <https://arsskysrsla2022.arionbanki.is/library/Files/abyrg-bankastarfsemi/PRB%20framvindusk%C3%BDrsla.pdf>
- Sustainability statement (2022): <https://arsskysrsla2022.arionbanki.is/library/Files/Sjalfbaerniskysrslur/Umhverfis%C3%BE%C3%A6ttir-EN.pdf>

### Islandsbanki

- Investor relations: <https://www.islandsbanki.is/en/landing/about/investor-relations>
- Pillar 3 report (2022): <https://cdn.islandsbanki.is/image/upload/v1/documents/Pillar3Report2022.pdf>
- Sustainability policy (2021): [https://cdn.islandsbanki.is/image/upload/v1/documents/Islandsbanki\\_Sustainability\\_Policy\\_English.pdf](https://cdn.islandsbanki.is/image/upload/v1/documents/Islandsbanki_Sustainability_Policy_English.pdf)
- Sustainability statement (2022): [https://cdn.islandsbanki.is/image/upload/v1/documents/Islandsbanki\\_Sustainability\\_Statement\\_2022.pdf](https://cdn.islandsbanki.is/image/upload/v1/documents/Islandsbanki_Sustainability_Statement_2022.pdf)
- Principles for Responsible Banking Reporting and Self-Assessment (2022): <https://cdn.islandsbanki.is/image/upload/v1/documents/PRB-Reporting-and-Self-Assessment-Islandsbanki-2022.pdf>
- On the Road to Net-Zero (2022): [https://cdn.islandsbanki.is/image/upload/v1/documents/Road\\_to\\_net\\_zero\\_2022.pdf](https://cdn.islandsbanki.is/image/upload/v1/documents/Road_to_net_zero_2022.pdf)
- Allocation and Impact Report (2021): [https://cdn.islandsbanki.is/image/upload/v1/documents/Allocation\\_and\\_Impact\\_Report\\_2021\\_FINAL.pdf](https://cdn.islandsbanki.is/image/upload/v1/documents/Allocation_and_Impact_Report_2021_FINAL.pdf)

- Sustainable financing framework (2020):  
[https://cdn.islandsbanki.is/image/upload/v1/documents/ISB\\_Sustainable\\_Financing\\_Framework.pdf](https://cdn.islandsbanki.is/image/upload/v1/documents/ISB_Sustainable_Financing_Framework.pdf)
- Financed Emissions—Initial PCAF results for 2020 and 2019:  
[https://cdn.islandsbanki.is/image/upload/v1/documents/Islandsbanki\\_financed\\_emissions\\_20\\_2019.pdf](https://cdn.islandsbanki.is/image/upload/v1/documents/Islandsbanki_financed_emissions_20_2019.pdf)

### **Landsbankinn**

- Investor relations: <https://www.landsbankinn.is/en/the-bank/investor-relations>
- Pillar 3 report (2022):  
<https://www.landsbankinn.is/uploads/documents/arsskyrsluroguppjor/Landsbankinn-Pillar-III-Risk-Report-2022.pdf>
- Sustainable finance framework (2021):  
<https://www.landsbankinn.is/Uploads/Documents/English/Investor-relations/2021-01-21-LB-Sustainable-Finance-Framework.pdf>
- Second-party opinion on Landsbankinn's sustainable finance framework by Sustainalytics:  
<https://www.landsbankinn.is/Uploads/Documents/English/Investor-relations/2021-01-21-Landsbankinn-Sustainable-Finance-Framework-Sustainalytics.pdf>
- Sustainable finance impact report (2023):  
<https://www.landsbankinn.is/uploads/documents/bankinn/sjalfbaerni/2023-02-24-sustainable-financing-impact-report-2023.pdf>

Source: IMF staff.